



6560-50-P

## ENVIRONMENTAL PROTECTION AGENCY

### 40 CFR Part 52

[EPA-R06-OAR-2008-0510; FRL-9640-6]

#### Approval and Promulgation of Implementation Plans; Louisiana; Regional Haze State

#### Implementation Plan

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Proposed rule.

**SUMMARY:** The EPA is proposing a partial disapproval and a partial limited approval of a revision to the Louisiana State Implementation Plan (SIP) submitted by the State of Louisiana through the Louisiana Department of Environmental Quality (LDEQ) on June 13, 2008, that addresses regional haze (RH) for the first implementation period. This revision was submitted to address the requirements of the Clean Air Act (CAA or Act) and the EPA's rules that require states to prevent any future and remedy any existing man-made impairment of visibility in mandatory Class I areas caused by emissions of air pollutants from numerous sources located over a wide geographic area (also referred to as the "regional haze program"). States are required to assure reasonable progress toward the national goal of achieving natural visibility conditions in Class I areas. In a separate action, the EPA has previously proposed a limited disapproval of the Louisiana regional haze SIP because of deficiencies in the state's regional haze SIP submittal arising from the remand by the U.S. Court of Appeals for the District of Columbia (D.C. Circuit) to the EPA of the Clean Air Interstate Rule (CAIR). In today's action, the EPA is proposing a

partial disapproval because of deficiencies in Louisiana's regional haze SIP submittal that go beyond the issues addressed in the EPA's proposed limited disapproval. The EPA is also proposing a partial limited approval of those elements of this SIP revision not addressed by our partial disapproval. The partial limited approval of the RH requirements for Louisiana is based on the conclusion that the revisions, as a whole, strengthen the Louisiana SIP. This action is being taken under section 110 and part C of the CAA.

**DATES:** Comments must be received on or before **[Insert date 30 days from date of publication in the Federal Register]**.

**ADDRESSES:** Submit your comments, identified by Docket No. EPA-R06-OAR-2008-0510, by one of the following methods:

- Federal e-Rulemaking Portal: *<http://www.regulations.gov>*. Follow the online instructions for submitting comments.
- E-mail: [R6AIR\\_LAHAZE@epa.gov](mailto:R6AIR_LAHAZE@epa.gov).
- Mail: Mr. Guy Donaldson, Chief, Air Planning Section (6PD-L), Environmental Protection Agency, 1445 Ross Avenue, Suite 1200, Dallas, Texas 75202-2733.
- Hand or Courier Delivery: Mr. Guy Donaldson, Chief, Air Planning Section (6PD-L), Environmental Protection Agency, 1445 Ross Avenue, Suite 1200, Dallas, Texas 75202-2733. Such deliveries are accepted only between the hours of 8 a.m. and 4 p.m. weekdays, and not on legal holidays. Special arrangements should be made for deliveries of boxed information.
- Fax: Mr. Guy Donaldson, Chief, Air Planning Section (6PD-L), at fax number 214-

*Instructions:* Direct your comments to Docket No. EPA-R06-OAR-2008-0510. Our policy is that all comments received will be included in the public docket without change and may be made available online at [www.regulations.gov](http://www.regulations.gov), including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through [www.regulations.gov](http://www.regulations.gov) or e-mail. The [www.regulations.gov](http://www.regulations.gov) web site is an “anonymous access” system, which means we will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to us without going through [www.regulations.gov](http://www.regulations.gov) your e-mail address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, we recommend that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If we cannot read your comment due to technical difficulties and cannot contact you for clarification, we may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses.

*Docket:* All documents in the docket are listed in the [www.regulations.gov](http://www.regulations.gov) index. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available either

electronically in [www.regulations.gov](http://www.regulations.gov) or in hard copy at the Air Planning Section (6PD-L), Environmental Protection Agency, 1445 Ross Avenue, Suite 700, Dallas, Texas 75202-2733. The file will be made available by appointment for public inspection in the Region 6 FOIA Review Room between the hours of 8:30 a.m. and 4:30 p.m. weekdays except for legal holidays. Contact the person listed in the **FOR FURTHER INFORMATION CONTACT** paragraph below or Mr. Bill Deese at 214-665-7253 to make an appointment. If possible, please make the appointment at least two working days in advance of your visit. There will be a fee of 15 cents per page for making photocopies of documents. On the day of the visit, please check in at our Region 6 reception area at 1445 Ross Avenue, Suite 700, Dallas, Texas.

The State submittal is also available for public inspection during official business hours, by appointment, at the Louisiana Department of Environmental Quality, 602 N. Fifth Street in Baton Rouge, Louisiana.

**FOR FURTHER INFORMATION CONTACT:** Ms. Ellen Belk, Air Planning Section (6PD-L), Environmental Protection Agency, Region 6, 1445 Ross Avenue, Suite 700, Dallas, Texas 75202-2733, telephone 214-665-2164; fax number 214-665-6762; e-mail address *belk.ellen@epa.gov*.

**SUPPLEMENTARY INFORMATION:** Throughout this document wherever “we,” “us,” or “our” is used, we mean the EPA.

## **Table of Contents:**

### **I. Executive Summary of Proposed Action**

## II. What is the Background for Our Proposed Actions?

- A. The Regional Haze Problem
- B. Requirements of the CAA and EPA's Regional Haze Rule (RHR)
- C. Roles of Agencies in Addressing Regional Haze

## III. What are the Requirements for Regional Haze SIPs?

- A. The CAA and the Regional Haze Rule
- B. Determination of Baseline, Natural, and Current Visibility Conditions
- C. Determination of Reasonable Progress Goals
- D. Best Available Retrofit Technology (BART)
- E. Long-Term Strategy (LTS)
- F. Coordinating Regional Haze and Reasonably Attributable Visibility Impairment (RAVI)
- G. Monitoring Strategy and Other SIP Requirements
- H. Coordination with Federal Land Managers

## IV. Our Analysis of Louisiana's Regional Haze SIP

- A. Identification of Affected Class I Areas
- B. Determination of Baseline, Natural and Current Visibility Conditions
  - 1. Estimating Natural Visibility Conditions
  - 2. Estimating Baseline Visibility Conditions
  - 3. Natural Visibility Impairment
  - 4. Uniform Rate of Progress
- C. Evaluation of Louisiana's Reasonable Progress Goals
- D. Evaluation of Louisiana's BART Analyses

1. Identification of BART-Eligible Sources
2. Identification of Sources Subject to BART
3. BART Determinations
  - a. ConocoPhillips
  - b. Rhodia
  - c. Sid Richardson Carbon Company

E. Long-Term Strategy

1. Emissions Inventories
  - a. Louisiana's 2002 Emission Inventory
  - b. Louisiana's 2018 Emission Inventory
2. Visibility Projection Modeling
3. Sources of Visibility Impairment
  - a. Sources of Visibility Impairment in the Breton Class I Area
  - b. Louisiana's Contribution to Visibility Impairment in Class I Areas Outside the State
4. Consultation for Other State's Class I Areas
5. Mandatory Long-Term Strategy Factors
  - a. Reductions Due to Ongoing Air Pollution Programs
  - b. Measures to Mitigate the Impacts of Construction Activities
  - c. Emissions Limitations and Schedules of Compliance
  - d. Source Retirement and Replacement Schedules
  - e. Agricultural and Forestry Smoke Management Techniques
  - f. Enforceability of Emissions Limitations and Control Measures

g. Anticipated Net Effect on Visibility Due to Projected Changes

F. Coordination of RAVI and Regional Haze Requirements

G. Monitoring Strategy and Other SIP Requirements

H. Coordination with Federal Land Managers

I. Periodic SIP Revisions and Five-year Progress Reports

J. Determination of the Adequacy of Existing Implementation Plan

V. Proposed Action

VI. Statutory and Executive Order Reviews

**I. Executive Summary of Proposed Action**

The EPA is proposing a partial limited approval of Louisiana's June 13, 2008, SIP revision addressing regional haze (RH) under CAA sections 301(a) and 110(k)(3) because certain provisions of the revision strengthen the Louisiana (LA) SIP. The EPA is also proposing a partial disapproval of the LA RH SIP submittal because the submittal includes several deficient provisions. The deficiencies identified in today's action go beyond those identified in the limited disapproval proposed on December 30, 2011 (76 FR 82219). Certain elements of the State's Best Available Retrofit Technology (BART) evaluations and determinations are not fully adequate to meet the federal requirements. Additionally, as a result of the deficiencies related to BART, the Long-Term Strategy (LTS) and Reasonable Progress Goals (RPGs) are not fully adequate to meet federal requirements. Finally, because visibility impacts from smoke are significant in Louisiana, we propose that Louisiana should finalize its Smoke Management Plan (SMP). The portions of the revision proposed for limited approval nevertheless represent an improvement over the current SIP, and make considerable progress in fulfilling the applicable CAA RH

program requirements. This proposed rulemaking and the accompanying Technical Support Document (TSD) explain the basis for EPA's proposed partial limited approval and partial disapproval.

Under CAA sections 301(a) and 110(k)(6) and EPA's long-standing guidance,<sup>1</sup> a limited approval results in approval of portions of the SIP submittal, even though they are deficient and prevent EPA from granting a full approval of the SIP revision. In an earlier proposed action, EPA has proposed a limited disapproval of Louisiana's RH SIP revision for not meeting all the applicable requirements of the CAA (76 FR 82219). In today's proposed action, having concluded based on a careful review of the LA RH SIP revision that there are deficiencies in the SIP beyond those identified in the proposed limited disapproval of the LA RH SIP, we are proposing a partial disapproval of those additional deficiencies and a partial limited approval of the rest of the LA RH SIP. The partial limited approval proposes to give limited approval to those portions of the SIP that are not being disapproved in today's action for their benefit in strengthening the SIP even though they do not fully meet regional haze requirements.

Specifically, we are proposing to find that the following elements of the submittal fully satisfy federal requirements insofar as the elements do not rely on the sulfur dioxide (SO<sub>2</sub>) reductions from CAIR: the State's identification of affected Class I areas; the establishment of baseline, natural and current visibility conditions, including the Uniform Rate of Progress (URP); coordination of reasonably attributable visibility impairment (RAVI) and RH requirements; the RH monitoring strategy and other SIP requirements under 40 CFR 51.308(d)(4); the State's commitment to submit periodic RH SIP revisions and periodic progress reports describing progress towards the State's RPGs; the State's commitment to make a determination of the

---

<sup>1</sup> *Processing of State Implementation Plan (SIP) Revisions*, EPA Memorandum from John Calcagni, Director, Air Quality Management Division, OAQPS, to Air Division Directors, EPA Regional Offices I-X (1992 Calcagni Memorandum) located at <http://www.epa.gov/ttn/caaa/t1/memoranda/siproc.pdf>.



adequacy of the existing SIP at the time a progress report is submitted; and the State's coordination with Federal Land Managers (FLMs).

We are proposing to find that Louisiana's RPGs meet some federal requirements, but also contain some deficiencies. We are proposing to find that the State's RPGs are deficient given our proposed finding that certain of Louisiana's BART determinations are not fully approvable. In general, the State followed the requirements of 40 CFR 51.308(d)(1), but these goals do not reflect appropriate emissions reductions from BART.

For LTS, we are proposing to find that the State's LTS satisfies many of the requirements under 40 CFR 51.308(d)(3); however, we are proposing to find that the submitted LTS is deficient because a portion of it relies on BART determinations that we are proposing to disapprove. Also, because visibility impacts from smoke are significant in Louisiana, we propose to find that that Louisiana should finalize its SMP.

For the BART analyses for sources other than electric generating units (EGUs), we are proposing to find that the State's identification of subject-to-BART sources meets federal requirements in part, but that the state should have identified Mosaic Fertilizer as being subject to BART and made a BART determination for the source. This is discussed in more detail in section IV.D.2 of this action. We are also proposing to find that LDEQ's BART determinations for Conoco Phillips, Rhodia, and Sid Richardson Carbon Black are not fully approvable. These BART determinations are discussed in more detail in section IV.D.3 of this action.

As noted above, in an earlier proposed action, EPA proposed a limited disapproval of the Louisiana regional haze SIP. EPA's proposed limited disapproval is based on deficiencies in the state's regional haze SIP submittal arising from the state's reliance on CAIR to meet certain regional haze requirements. In the same December 30, 2011 notice, EPA proposed to find that

the Transport Rule,<sup>2</sup> a rule issued in 2011 to address the interstate transport of NO<sub>x</sub> and SO<sub>2</sub> in the eastern United States would, like CAIR, provide for greater reasonable progress towards the national goal than would BART. 76 FR 82219. Based on this proposed finding, EPA also proposed to revise the Regional Haze Rule (RHR) to allow states to substitute participation in the trading programs under the Transport Rule for source-specific BART. This proposed revision applies only to EGUs in the states in the Transport Rule region and only to the pollutants subject to the requirements of the Transport Rule. States such as Louisiana that are subject to the requirements of the Transport Rule trading program only for nitrogen oxides (NO<sub>x</sub>) must still address BART for EGUs for SO<sub>2</sub> and other visibility impairing pollutants. *See*, 76 FR at 82224. Consequently, while we proposed on December 30, 2011 to issue a federal implementation plan (FIP) to address the deficiencies in Louisiana's SIP associated with the BART requirements for NO<sub>x</sub> for EGUs, we did not propose a plan to address the deficiencies associated with the BART requirements for SO<sub>2</sub>. The docket for this earlier EPA proposed limited disapproval of Louisiana's regional haze SIP may be found at Docket ID No. EPA-HQ-OAR-2011-0729.

Louisiana also relied on CAIR in assessing the need for emissions reductions from EGUs to ensure reasonable progress. Consequently, Louisiana will have to reconsider whether reductions of SO<sub>2</sub> from EGUs, whether subject to BART or not, are appropriate for ensuring reasonable progress.

Where a submittal addresses a mandatory requirement of the CAA, we must, within 24 months following a final disapproval, either approve a SIP or promulgate a FIP. CAA section 110(c)(1). At this time, we are not proposing a FIP for the portions of the Louisiana RH SIP we are proposing in this action to find deficient because LDEQ has expressed its intent to revise the Louisiana RH SIP by correcting the deficiencies. We are electing to not propose a FIP at this

---

<sup>2</sup> 76 FR 48208 (August 8, 2011).

time in order to provide Louisiana time to correct these deficiencies. However, a final partial disapproval of Louisiana's RH SIP will start the two-year mandatory FIP clock. If the State submits an approvable rule revision during the FIP clock period, final approval of the rule revision correcting the deficiencies will terminate the FIP clock.

## **II. What is the Background for Our Proposed Action?**

### **A. The Regional Haze Problem**

Regional haze is visibility impairment that is produced by a multitude of sources and activities which are located across a broad geographic area and emit fine particulate matter (PM<sub>2.5</sub>) (e.g., sulfates, nitrates, organic carbon, elemental carbon, and soil dust), and their precursors (e.g., SO<sub>2</sub>, NO<sub>x</sub>, and in some cases, ammonia (NH<sub>3</sub>) and volatile organic compounds (VOCs)). Fine particle precursors react in the atmosphere to form fine particulate matter that impairs visibility by scattering and absorbing light. Visibility impairment reduces the clarity, color, and visible distance that one can see. PM<sub>2.5</sub> can also cause serious health effects and mortality in humans and contributes to environmental effects such as acid deposition and eutrophication.

Data from the existing visibility monitoring network, the "Interagency Monitoring of Protected Visual Environments" (IMPROVE) monitoring network, show that visibility impairment caused by air pollution occurs virtually all the time at most national park and wilderness areas. The average visual range<sup>3</sup> in many Class I areas<sup>4</sup> (i.e., national parks and

---

<sup>3</sup> Visual range is the greatest distance, in kilometers or miles, at which a dark object can be viewed against the sky.

<sup>4</sup> Areas designated as mandatory Class I Federal areas consist of national parks exceeding 6,000 acres, wilderness areas and national memorial parks exceeding 5,000 acres, and all international parks that were in existence on August 7, 1977. *See*, 42 U.S.C. 7472(a). In accordance with section 169A of the CAA, EPA, in consultation with the Department of Interior, promulgated a list of 156 areas where visibility is identified as an important value. *See*, 44 FR 69122, November 30, 1979. The extent of a mandatory Class I area includes subsequent changes in boundaries, such as park expansions. *See*, 42 U.S.C. 7472(a). Although states and tribes may designate as Class I

memorial parks, wilderness areas, and international parks meeting certain size criteria) in the western United States is 100-150 kilometers, or about one-half to two-thirds of the visual range that would exist without anthropogenic air pollution. In most of the eastern Class I areas of the United States, the average visual range is less than 30 kilometers, or about one-fifth of the visual range that would exist under estimated natural conditions. *See*, 64 FR 35715, July 1, 1999.

## **B. Requirements of the CAA and EPA's Regional Haze Rule (RHR)**

In section 169A of the 1977 Amendments to the CAA, Congress created a program for protecting visibility in the nation's national parks and wilderness areas. This section of the CAA establishes as a national goal the "prevention of any future, and the remedying of any existing, impairment of visibility in mandatory Class I Federal areas which impairment results from manmade air pollution." On December 2, 1980, the EPA promulgated regulations to address visibility impairment in Class I areas that is "reasonably attributable" to a single source or small group of sources, i.e., "reasonably attributable visibility impairment." 45 FR 80084. These regulations represented the first phase in addressing visibility impairment. The EPA deferred action on regional haze that emanates from a variety of sources until monitoring, modeling, and scientific knowledge about the relationships between pollutants and visibility impairment were improved.

Congress added section 169B to the CAA in 1990 to address regional haze issues. The EPA promulgated a rule to address regional haze on July 1, 1999 (64 FR 35713), the RHR. The RHR revised the existing visibility regulations to integrate into the regulation provisions

---

additional areas which they consider to have visibility as an important value, the requirements of the visibility program set forth in section 169A of the CAA apply only to "mandatory Class I Federal areas." Each mandatory Class I Federal area is the responsibility of a "Federal Land Manager." *See*, 42 U.S.C. 7602(i). When the term "Class I area" is used in this action, it means a "mandatory Class I Federal area."

addressing regional haze impairment and established a comprehensive visibility protection program for Class I areas. The requirements for regional haze, found at 40 CFR 51.308 and 51.309, are included in the EPA's visibility protection regulations at 40 CFR 51.300-309. Some of the main elements of the regional haze requirements are summarized in section III of this proposal. The requirement to submit a regional haze SIP applies to all 50 states, the District of Columbia, and the Virgin Islands.<sup>5</sup> 40 CFR 51.308(b) requires states to submit the first implementation plan addressing regional haze visibility impairment no later than December 17, 2007.

### **C. Roles of Agencies in Addressing Regional Haze**

Successful implementation of the RH program will require long-term regional coordination among states, tribal governments and various federal agencies. As noted above, pollution affecting the air quality in Class I areas can be transported over long distances, even hundreds of kilometers (km). Therefore, to address effectively the problem of visibility impairment in Class I areas, states need to develop strategies in coordination with one another, taking into account the effect of emissions from one jurisdiction on the air quality in another.

Because the pollutants that lead to RH can originate from sources located across broad geographic areas, we have encouraged the states and tribes across the United States (U.S.) to address visibility impairment from a regional perspective. Five regional planning organizations (RPOs) were developed to address RH and related issues. The RPOs first evaluated technical information to better understand how their states and tribes impact Class I areas across the country, and then pursued the development of regional strategies to reduce emissions of

---

<sup>5</sup> Albuquerque/Bernalillo County in New Mexico must also submit a regional haze SIP to completely satisfy the requirements of section 110(a)(2)(D) of the CAA for the entire State of New Mexico under the New Mexico Air Quality Control Act (section 74-2-4).

particulate matter and other pollutants leading to RH.

The Central Regional Air Planning Association (CENRAP) is an organization of states, tribes, federal agencies and other interested parties that identifies RH and visibility issues and develops strategies to address them. The CENRAP is one of the five RPOs across the U.S. and includes the states and tribal areas of Nebraska, Kansas, Oklahoma, Texas, Minnesota, Iowa, Missouri, Arkansas, and Louisiana.

### **III. What are the Requirements for Regional Haze SIPs?**

The following is a summary and basic explanation of the regulations covered under the RHR. *See*, 40 CFR 51.308 for a complete listing of the regulations under which this SIP is being evaluated.

#### **A. The CAA and the Regional Haze Rule**

RH SIPs must assure reasonable progress towards the national goal of achieving natural visibility conditions in Class I areas. Section 169A of the CAA and our implementing regulations require states to establish long-term strategies for making reasonable progress toward meeting this goal. Implementation plans must also give specific attention to certain stationary sources that were in existence on August 7, 1977, but were not in operation before August 7, 1962, and require these sources, where appropriate, to install BART controls for the purpose of eliminating or reducing visibility impairment. The specific RH SIP requirements are discussed in further detail in this section.

#### **B. Determination of Baseline, Natural, and Current Visibility Conditions**

The RHR establishes the deciview (dv) as the principal metric for measuring visibility. *See*, 70 FR 39104. This visibility metric expresses uniform changes in the degree of haze in terms of common increments across the entire range of visibility conditions, from pristine to extremely hazy conditions. Visibility is sometimes expressed in terms of the visual range, which is the greatest distance, in kilometers or miles, at which a dark object can just be distinguished against the sky. The deciview is a useful measure for tracking progress in improving visibility, because each deciview change is an equal incremental change in visibility perceived by the human eye. Most people can detect a change in visibility of one deciview.<sup>6</sup>

The deciview is used in expressing RPGs (which are interim visibility goals towards meeting the national visibility goal), defining baseline, current, and natural conditions, and tracking changes in visibility. The RH SIPs must contain measures that ensure “reasonable progress” toward the national goal of preventing and remedying visibility impairment in Class I areas caused by man-made air pollution by reducing anthropogenic emissions that cause RH. The national goal is a return to natural conditions, i.e., man-made sources of air pollution would no longer impair visibility in Class I areas.

To track changes in visibility over time at each of the 156 Class I areas covered by the visibility program (40 CFR 81.401-437), and as part of the process for determining reasonable progress, states must calculate the degree of existing visibility impairment at each Class I area at the time of each RH SIP submittal and periodically review progress every five years, midway through each 10-year implementation period. To do this, the RHR requires states to determine the degree of impairment (in deciviews) for the average of the 20 percent least impaired (“best”) and 20 percent most impaired (“worst”) visibility days over a specified time period at each of their Class I areas. In addition, states must also develop an estimate of natural visibility

---

<sup>6</sup> The preamble to the RHR provides additional details about the deciview. 64 FR 35714, 35725 (July 1, 1999).

conditions for the purpose of comparing progress toward the national goal. Natural visibility is determined by estimating the natural concentrations of pollutants that cause visibility impairment and then calculating total light extinction based on those estimates. We have provided guidance to states regarding how to calculate baseline, natural and current visibility conditions.<sup>7</sup>

For the first RH SIPs that were due by December 17, 2007, “baseline visibility conditions” were the starting points for assessing “current” visibility impairment. Baseline visibility conditions represent the degree of visibility impairment for the 20 percent least impaired days and 20 percent most impaired days for each calendar year from 2000 to 2004. Using monitoring data for 2000 through 2004, states are required to calculate the average degree of visibility impairment for each Class I area, based on the average of annual values over the five-year period. The comparison of initial baseline visibility conditions to natural visibility conditions indicates the amount of improvement necessary to attain natural visibility, while the future comparison of baseline conditions to the then current conditions will indicate the amount of progress made. In general, the 2000 - 2004 baseline period is considered the time from which improvement in visibility is measured.

### **C. Determination of Reasonable Progress Goals**

The vehicle for ensuring continuing progress towards achieving the natural visibility goal is the submission of a series of RH SIPs from the states that establish two RPGs (i.e., two distinct goals, one for the “best” and one for the “worst” days) for every Class I area for each (approximately) 10-year implementation period. *See*, 70 FR 3915; *See also* 64 FR 35714. The

---

<sup>7</sup> *Guidance for Estimating Natural Visibility Conditions Under the Regional Haze Rule*, September 2003, EPA-454/B-03-005, available at [http://www.epa.gov/ttncaaa1/t1/memoranda/rh\\_envcurhr\\_gd.pdf](http://www.epa.gov/ttncaaa1/t1/memoranda/rh_envcurhr_gd.pdf), (hereinafter referred to as “our 2003 Natural Visibility Guidance”); and *Guidance for Tracking Progress Under the Regional Haze Rule*, (EPA-454/B-03-004, September 2003, available at [http://www.epa.gov/ttncaaa1/t1/memoranda/rh\\_tpurhr\\_gd.pdf](http://www.epa.gov/ttncaaa1/t1/memoranda/rh_tpurhr_gd.pdf), (hereinafter referred to as our “2003 Tracking Progress Guidance”).



RHR does not mandate specific milestones or rates of progress, but instead calls for states to establish goals that provide for “reasonable progress” toward achieving natural (i.e., “background”) visibility conditions. In setting RPGs, states must provide for an improvement in visibility for the most impaired days over the (approximately) 10-year period of the SIP, and ensure no degradation in visibility for the least impaired days over the same period. *Id.*

States have significant discretion in establishing RPGs, but are required to consider the following factors established in section 169A of the CAA and in our RHR at 40 CFR 51.308(d)(1)(i)(A): (1) the costs of compliance; (2) the time necessary for compliance; (3) the energy and non-air quality environmental impacts of compliance; and (4) the remaining useful life of any potentially affected sources. States must demonstrate in their SIPs how these factors are considered when selecting the RPGs for the best and worst days for each applicable Class I area. States have considerable flexibility in how they take these factors into consideration, as noted in our Reasonable Progress Guidance.<sup>8</sup> In setting the RPGs, states must also consider the rate of progress needed to reach natural visibility conditions by 2064 (the URP) and the emission reduction measures needed to achieve that rate of progress over the 10-year period of the SIP. Uniform progress towards achievement of natural conditions by the year 2064 represents a rate of progress, which states are to use for analytical comparison to the amount of progress they expect to achieve. In setting RPGs, each state with one or more Class I areas (“Class I State”) must also consult with potentially “contributing states,” i.e., other nearby states with emission sources that may be affecting visibility impairment at the Class I State’s areas. 40 CFR 51.308(d)(1)(iv).

---

<sup>8</sup> *Guidance for Setting Reasonable Progress Goals under the Regional Haze Program*, June 1, 2007, memorandum from William L. Wehrum, Acting Assistant Administrator for Air and Radiation, to EPA Regional Administrators, EPA Regions 1-10 (pp.4-2, 5-1).

#### **D. Best Available Retrofit Technology (BART)**

Section 169A of the CAA directs states to evaluate the use of retrofit controls at certain larger, often uncontrolled, older stationary sources with the potential to emit greater than 250 tons per year (tpy) or more of any visibility impairing pollutant in order to address visibility impacts from these sources. Specifically, section 169A(b)(2)(A) of the Act requires states to revise their SIPs to contain such measures as may be necessary to make reasonable progress towards the natural visibility goal, including a requirement that certain categories of existing major stationary sources<sup>9</sup> built between 1962 and 1977 procure, install, and operate the “Best Available Retrofit Technology”, as determined by the state or us in the case of a plan promulgated under section 110(c) of the CAA. Under the RHR, states are directed to conduct BART determinations for such “BART-eligible” sources that may be anticipated to cause or contribute to any visibility impairment in a Class I area. Rather than requiring source-specific BART controls, states also have the flexibility to adopt an emissions trading program or other alternative program as long as the alternative provides greater reasonable progress towards improving visibility than BART.

We promulgated regulations addressing RH in 1999, 64 FR 35714 (July 1, 1999), codified at 40 CFR part 51, subpart P.<sup>10</sup> These regulations require all states to submit implementation plans that, among other measures, contain either emission limits representing BART for certain sources constructed between 1962 and 1977, or alternative measures that provide for greater reasonable progress than BART. 40 CFR 51.308(e).

---

<sup>9</sup> The set of “major stationary sources” potentially subject to BART are listed in CAA section 169A(g)(7).

<sup>10</sup> In *American Corn Growers Ass’n v. EPA*, 291 F.3d 1 (D.C. Cir. 2002), the U.S. Court of Appeals for the District of Columbia Circuit issued a ruling vacating and remanding the BART provisions of the regional haze rule. In 2005, we issued BART guidelines to address the court’s ruling in that case. *See* 70 FR 39104 (July 6, 2005).

On July 6, 2005, we published the *Guidelines for BART Determinations Under the Regional Haze Rule* at Appendix Y to 40 CFR Part 51 (“BART Guidelines”) to assist states in determining which of their sources should be subject to the BART requirements and in determining appropriate emission limits for each applicable source. 70 FR 39104. In making a BART determination for a fossil fuel-fired electric generating plant with a total generating capacity in excess of 750 megawatts (MW), a state must use the approach set forth in the BART Guidelines. A state is encouraged, but not required, to follow the BART Guidelines in making BART determinations for other types of sources; however, all subject to BART sources are required to comply with the five BART factors (or steps) (40 CFR 51.308(e)(1)(ii)(A)).

The process of establishing BART emission limitations can be logically broken down into three steps: first, states identify those sources that meet the definition of “BART-eligible source” set forth in 40 CFR 51.301;<sup>11</sup> second, states determine whether each identified source “emits any air pollutant which may reasonably be anticipated to cause or contribute to any impairment of visibility in any such area” (a source that fits this description is “subject to BART,”) and; third, for each source subject to BART, states then identify the appropriate type and the level of control for reducing emissions.

States must address all visibility-impairing pollutants emitted by a source in the BART determination process. The most significant visibility impairing pollutants are SO<sub>2</sub>, NO<sub>x</sub>, and PM. We have stated that states should use their best judgment in determining whether VOC or ammonia compounds impair visibility in Class I areas.

Under the BART Guidelines, states may select an exemption threshold value for their BART modeling, below which a BART-eligible source would not be expected to cause or

---

<sup>11</sup> BART-eligible sources are those sources that have the potential to emit 250 tons or more of a visibility-impairing air pollutant, were put in place between August 7, 1962 and August 7, 1977, and whose operations fall within one or more of 26 specifically listed source categories.

contribute to visibility impairment in any Class I area. The state must document this exemption threshold value in the SIP and must state the basis for its selection of that value. States have three options for exempting a BART-eligible source from the BART requirements, including dispersion modeling demonstrating that the source cannot reasonably be anticipated to cause or contribute to visibility impairment in a Class I area, use of model plants to exempt sources with common characteristics, and cumulative modeling to show that no sources in Louisiana are subject to BART. Any source with emissions that model above the threshold value would be subject to a BART determination review. The BART Guidelines acknowledge varying circumstances affecting different Class I areas. States should consider the number of emission sources affecting the Class I areas at issue and the magnitude of the individual sources' impacts. Any exemption threshold set by the state should not be higher than 0.5 dv. *See also*, 40 CFR part 51, Appendix Y, section III.A.1.

In their SIPs, states must identify potential BART sources, described as “BART-eligible sources” in the RHR, and document their BART control determination analyses. The term “BART-eligible source” used in the BART Guidelines means the collection of individual emission units at a facility that together comprises the BART-eligible source. In making BART determinations, section 169A(g)(2) of the CAA requires that states consider the following factors: (1) the costs of compliance; (2) the energy and non-air quality environmental impacts of compliance; (3) any existing pollution control technology in use at the source; (4) the remaining useful life of the source; and (5) the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology. States are free to determine the weight and significance to be assigned to each factor. *See*, 40 CFR 51.308(e)(1)(ii).

A RH SIP must include source-specific BART emission limits and compliance schedules

for each source subject to BART (*See*, CAA section 169A(b)(2), 40 CFR 51.308(e), and 64 FR 35714, 35741). Once a state has made its BART determination, the BART controls must be installed and in operation as expeditiously as practicable, but no later than five years after the date of our approval of the RH SIP. CAA section 169(g)(4) and 40 CFR 51.308(e)(1)(iv). In addition to what is required by the RHR, general SIP requirements mandate that the SIP must also include all regulatory requirements related to monitoring, recordkeeping, and reporting for the BART controls on the source. *See*, CAA section 110(a).

As noted above, the RHR allows states to implement an alternative program in lieu of BART so long as the alternative program can be demonstrated to achieve greater reasonable progress toward the national visibility goal than would BART. Under regulations issued in 2005 revising the RH program, the EPA made just such a demonstration for the CAIR. *See*, 70 FR 39104 (July 6, 2005). The EPA's regulations provide that states participating in the CAIR cap-and-trade program under 40 CFR part 96 pursuant to an EPA-approved CAIR SIP or which remain subject to the CAIR FIP in 40 CFR part 97 need not require affected BART-eligible EGUs to install, operate, and maintain BART for emissions of SO<sub>2</sub> and NO<sub>x</sub>. *See*, 40 CFR 51.308(e)(4). Because the CAIR did not address direct emissions of PM, states were still required to conduct a BART analysis for PM emissions from EGUs subject to BART for that pollutant. The CAIR required controls of both SO<sub>2</sub> and NO<sub>x</sub> in Louisiana. Challenges to the CAIR, however, resulted in the remand of the rule to the EPA. *See, North Carolina v. EPA*, 550 F.3d 1176 (D.C. Cir. 2008). The EPA issued the Transport Rule in 2011 to address the interstate transport of NO<sub>x</sub> and SO<sub>2</sub> in the eastern United States. *See*, 76 FR 48208 (August 8, 2011). On December 30, 2011, the EPA proposed to find that the trading programs in the Transport Rule would achieve greater reasonable progress towards the national goal than would BART in the

states in which the Transport Rule applies. 76 FR 82219. Based on this proposed finding, the EPA also proposed to revise the RHR to allow states to substitute participation in the trading programs under the Transport Rule for source-specific BART. The transport rule requires control of NO<sub>x</sub> during the ozone season in Louisiana. It does not, however, require control of SO<sub>2</sub>. The EPA has not taken final action on that rule.

#### **E. Long-Term Strategy (LTS)**

Consistent with the requirement in section 169A(b) of the CAA that states include in their RH SIP a 10 to 15-year strategy for making reasonable progress, 40 CFR 51.308(d)(3) of the RHR requires that states include a LTS in their RH SIPs. The LTS is the compilation of all control measures a state will use during the implementation period of the specific SIP submittal to meet any applicable RPGs. The LTS must include “enforceable emissions limitations, compliance schedules, and other measures as necessary to achieve the reasonable progress goals” for all Class I areas within, or affected by emissions from, the state. 40 CFR 51.308(d)(3).

When a state’s emissions are reasonably anticipated to cause or contribute to visibility impairment in a Class I area located in another state, the RHR requires the impacted state to coordinate with the contributing states in order to develop coordinated emissions management strategies. 40 CFR 51.308(d)(3)(i). Also, a state with a Class I area impacted by emissions from another state must consult with such contributing state, (*id.*) and must also demonstrate that it has included in its SIP all measures necessary to obtain its share of emission reductions needed to meet the reasonable progress goals for the Class I area. *Id.* at (d)(3)(ii). The RPOs have provided forums for significant interstate consultation, but additional consultations between states may be required to sufficiently address interstate visibility issues. This is especially true where two states

belong to different RPOs.

States should consider all types of anthropogenic sources of visibility impairment in developing their LTS, including stationary, minor, mobile, and area sources. At a minimum, states must describe how each of the following seven factors listed below are taken into account in developing their LTS: (1) emission reductions due to ongoing air pollution control programs, including measures to address RAVI; (2) measures to mitigate the impacts of construction activities; (3) emissions limitations and schedules for compliance to achieve the RPG; (4) source retirement and replacement schedules; (5) smoke management techniques for agricultural and forestry management purposes including plans as currently exist within the state for these purposes; (6) enforceability of emissions limitations and control measures; and (7) the anticipated net effect on visibility due to projected changes in point, area, and mobile source emissions over the period addressed by the LTS. 40 CFR 51.308(d)(3)(v).

#### **F. Coordinating Regional Haze and Reasonably Attributable Visibility Impairment (RAVI)**

As part of the RHR, we revised 40 CFR 51.306(c) regarding the LTS for RAVI to require that the RAVI plan must provide for a periodic review and SIP revision not less frequently than every three years until the date of submission of the state's first plan addressing RH visibility impairment, which was due December 17, 2007, in accordance with 40 CFR 51.308(b) and (c). On or before this date, the state must revise its plan to provide for review and revision of a coordinated LTS for addressing RAVI and RH, and the state must submit the first such coordinated LTS with its first RH SIP. Future coordinated LTS and periodic progress reports evaluating progress towards RPGs, must be submitted consistent with the schedule for SIP

submission and periodic progress reports set forth in 40 CFR 51.308(f) and (g), respectively. The periodic review of a state's LTS must report on both RH and RAVI and must be submitted to us as a SIP revision.

## **G. Monitoring Strategy and Other SIP Requirements**

40 CFR 51.308(d)(4) of the RHR includes the requirement for a monitoring strategy for measuring, characterizing, and reporting of RH visibility impairment that is representative of all mandatory Class I Federal areas within the state. The strategy must be coordinated with the monitoring strategy required in 40 CFR 51.305 for RAVI. Compliance with this requirement may be met through "participation" in the IMPROVE network, i.e., review and use of monitoring data from the network. The monitoring strategy is due with the first RH SIP, and it must be reviewed every five years. The monitoring strategy must also provide for additional monitoring sites if the IMPROVE network is not sufficient to determine whether RPGs will be met.

The SIP must also provide for the following:

- Procedures for using monitoring data and other information in a state with mandatory Class I areas to determine the contribution of emissions from within the state to RH visibility impairment at Class I areas both within and outside the state;
- Procedures for using monitoring data and other information in a state with no mandatory Class I areas to determine the contribution of emissions from within the state to RH visibility impairment at Class I areas in other states;
- Reporting of all visibility monitoring data to the Administrator at least annually for each Class I area in the state, and where possible, in electronic format;
- Developing a statewide inventory of emissions of pollutants that are reasonably



anticipated to cause or contribute to visibility impairment in any Class I area. The inventory must include emissions for a baseline year, emissions for the most recent year for which data are available, and estimates of future projected emissions. A state must also make a commitment to update the inventory periodically; and

- Other elements, including reporting, recordkeeping, and other measures necessary to assess and report on visibility.

The RHR requires control strategies to cover an initial implementation period extending to the year 2018, with a comprehensive reassessment and revision of those strategies, as appropriate, every 10 years thereafter. Periodic SIP revisions must meet the core requirements of 40 CFR 51.308(d) with the exception of BART. The requirement to evaluate sources for BART applies only to RH SIPs that address the first implementation period. *See*, 40 CFR 51.308(f). Facilities subject to BART must continue to comply with the BART provisions of 40 CFR 51.308(e), as noted above. Periodic SIP revisions will assure that the statutory requirement of reasonable progress will continue to be met.

## **H. Coordination with Federal Land Managers**

The RHR requires that states consult with FLMs before adopting and submitting their SIPs. 40 CFR 51.308(i). States must provide FLMs an opportunity for consultation, in person and at least 60 days prior to holding any public hearing on the SIP. This consultation must include the opportunity for the FLMs to discuss their assessment of impairment of visibility in any Class I area and to offer recommendations on the development of the RPGs and on the development and implementation of strategies to address visibility impairment. Further, a state must include in its SIP a description of how it addressed any comments provided by the FLMs.

Finally, a SIP must provide procedures for continuing consultation between the state and FLMs regarding the state's visibility protection program, including development and review of SIP revisions, five-year progress reports, and the implementation of other programs having the potential to contribute to impairment of visibility in Class I areas.

#### **IV. Our Analysis of Louisiana's Regional Haze SIP**

##### **A. Identification of Affected Class I Areas**

As required by 40 CFR 51.308(d) of the RHR, the State of Louisiana has identified one Class I area within its borders, Breton National Wilderness Area (Breton NWA, or Breton). Part of a long chain of barrier islands, the area comprises a small part of the Breton National Wildlife Refuge located in the Breton Sound off the southeast coast of Louisiana. Breton NWA was identified by the LDEQ in its SIP. The FLM for Breton NWA is the U.S. Fish and Wildlife Service (USFWS) a bureau within the U.S. Department of Interior. The Louisiana RH SIP establishes RPGs for Breton and a LTS to achieve these goals within the first RH implementation period ending in 2018.

In developing its SIP, the LDEQ also considered whether Louisiana emissions from Louisiana sources impact visibility at Class I areas outside of the state and determined that Louisiana emissions do not cause or contribute to visibility impairment at Class I areas outside the State. Class I areas outside of Louisiana that were considered by the LDEQ included the 14,460 acre Caney Creek Wilderness Area in southwest Arkansas. In other parts of its SIP, the LDEQ does examine the impact of Louisiana's emissions on the visibility at other Class I areas as well.

We propose to find that the LDEQ correctly identified the Breton Class I area in

Louisiana, and other Class I areas outside of its borders that may be impacted by emissions from Louisiana sources.

## **B. Determination of Baseline, Natural and Current Visibility Conditions**

As required by 40 CFR 51.308(d)(2)(i) of the RHR and in accordance with the EPA's *Guidance for Estimating Natural Visibility Conditions Under the Regional Haze Rule*, ("Visibility Guidance"),<sup>12</sup> the LDEQ calculated baseline/current<sup>13</sup> and natural visibility conditions for Breton NWA on the most impaired and least impaired days, as summarized below (and further described in the TSD).

### **1. Estimating Natural Visibility Conditions**

Natural background visibility, as defined in the Visibility Guidance, is estimated by calculating the expected light extinction using default estimates of natural concentrations of fine particle components adjusted by site-specific estimates of humidity. This calculation uses the IMPROVE equation, which is a formula for estimating light extinction from the estimated natural concentrations of fine particle components (or from components measured by the IMPROVE monitors). As documented in the Visibility Guidance, the EPA allows states to use "refined" or alternative approaches to the Visibility Guidance to estimate the values that characterize the natural visibility conditions of Class I areas. One alternative approach is to develop and justify the use of alternative estimates of natural concentrations of fine particle components. Another alternative is to use the "new IMPROVE equation" that was adopted for

---

<sup>12</sup> Guidance for Estimating Natural Visibility Conditions Under the Regional Haze Rule, EPA-454/B-03-005, September 2003.

<sup>13</sup> As this is the first RH SIP submittal, the calculated baseline visibility condition and the current visibility condition will be the same. We expect that subsequent RH SIP submittals will reflect different calculated numbers for baseline and current visibility conditions due to the change in conditions.

use by the IMPROVE Steering Committee in December 2005.<sup>14</sup> The purpose of this refinement to the “old IMPROVE equation” is to provide more accurate estimates of the various factors that affect the calculation of light extinction.

The LDEQ opted to use the new IMPROVE equation to calculate the “refined” natural visibility conditions. For Breton NWA, the LDEQ used the new IMPROVE equation to calculate the “refined” natural visibility value for the 20 percent worst days to be 11.93 deciviews and for the 20 percent best days to be 4.25 deciviews. We reviewed the LDEQ’s estimates of the natural visibility conditions for Breton NWA and are proposing to find them acceptable using the new IMPROVE equation.

The new IMPROVE equation takes into account the most recent review of the science<sup>15</sup> and it accounts for the effect of particle size distribution on light extinction efficiency of sulfate ( $\text{SO}_4$ ), nitrate ( $\text{NO}_3$ ), and organic carbon. It also adjusts the mass multiplier for organic carbon (particulate organic matter) by increasing it from 1.4 to 1.8. New terms are added to the equation to account for light extinction by sea salt and light absorption by gaseous nitrogen dioxide. Site-specific values are used for Rayleigh scattering (scattering of light due to atmospheric gases) to account for the site-specific effects of elevation and temperature. Separate relative humidity

---

<sup>14</sup> The IMPROVE program is a cooperative measurement effort governed by a steering committee composed of representatives from Federal agencies (including the EPA and FLMs) and RPOs. The IMPROVE monitoring program was established in 1985 to aid the creation of Federal and State implementation plans for the protection of visibility in Class I areas. One of the objectives of IMPROVE is to identify chemical species and emission sources responsible for existing anthropogenic visibility impairment. The IMPROVE program has also been a key participant in visibility-related research, including the advancement of monitoring instrumentation, analysis techniques, visibility modeling, policy formulation and source attribution field studies.

<sup>15</sup> The science behind the revised IMPROVE equation is discussed Chapter 5 and Appendix B of the LDEQ’s TSD for the Louisiana RH SIP and in numerous published papers. See for example: Hand, J.L., and Malm, W.C., 2006, *Review of the IMPROVE Equation for Estimating Ambient Light Extinction Coefficients - Final Report*. March 2006. Prepared for Interagency Monitoring of Protected Visual Environments (IMPROVE), Colorado State University, Cooperative Institute for Research in the Atmosphere, Fort Collins, Colorado, available at [http://vista.cira.colostate.edu/improve/publications/GrayLit/016\\_IMPROVEeqReview/IMPROVEeqReview.htm](http://vista.cira.colostate.edu/improve/publications/GrayLit/016_IMPROVEeqReview/IMPROVEeqReview.htm) and Pitchford, Marc., 2006, *Natural Haze Levels II: Application of the New IMPROVE Algorithm to Natural Species Concentrations Estimates*. Final Report of the Natural Haze Levels II Committee to the RPO Monitoring/Data Analysis Workgroup. September 2006, available at [http://vista.cira.colostate.edu/improve/Publications/GrayLit/029\\_NaturalCondII/naturalhazelevelsIIreport.ppt](http://vista.cira.colostate.edu/improve/Publications/GrayLit/029_NaturalCondII/naturalhazelevelsIIreport.ppt).

enhancement factors are used for small and large size distributions of ammonium sulfate and ammonium nitrate and for sea salt. The terms for the remaining contributors, elemental carbon (light-absorbing carbon), fine soil, and coarse mass terms, do not change between the original and new IMPROVE equations.

## **2. Estimating Baseline Visibility Conditions**

As required by 40 CFR 51.308(d)(2)(i) of the RHR and in accordance with the Visibility Guidance, the LDEQ calculated baseline visibility conditions for Breton NWA. The baseline condition calculation begins with the calculation of light extinction, using the IMPROVE equation. The IMPROVE equation sums the light extinction<sup>16</sup> resulting from individual pollutants, such as sulfates and nitrates. As with the natural visibility conditions calculation, the LDEQ chose to use the new IMPROVE equation.

The period for establishing baseline visibility conditions is 2000-2004, and baseline conditions must be calculated using available monitoring data. 40 CFR 51.308(d)(2). The Breton IMPROVE monitor did not meet the data capture requirements of the RHR for the 2000-2004 monitoring period; however data from a nearby monitoring site, the Gulfport SEARCH site, was used to supplement the Breton monitoring data. We found the use of this data to be acceptable. The Breton monitor was subsequently destroyed in 2005 by Hurricane Katrina and since replaced and relocated. The LDEQ calculated the baseline conditions at the Breton Class I area as 25.73 deciviews on the 20 percent worst days, and 13.12 deciviews on the 20 percent best days. We have reviewed the LDEQ's estimation of baseline visibility conditions at Breton and are proposing to find these estimates acceptable.

---

<sup>16</sup> The amount of light lost as it travels over one million meters. The haze index, in units of deciviews (dv), is calculated directly from the total light extinction,  $b_{\text{ext}}$  expressed in inverse megameters ( $\text{Mm}^{-1}$ ), as follows:  $\text{HI} = 10 \ln(b_{\text{ext}}/10)$ .

### **3. Natural Visibility Impairment**

To address 40 CFR 51.308(d)(2)(iv)(A), the LDEQ also calculated the number of deciviews by which baseline conditions exceed natural visibility conditions for the best and worst days at Breton NWA. For the 20 percent worst days, the LDEQ calculated the number of deciviews by which baseline conditions exceed natural visibility conditions to be 13.80 dv (baseline of 25.73 dv, minus natural conditions of 11.93 dv). For the 20 percent best days at Breton, the baseline conditions exceed natural visibility conditions by 8.87 dv (baseline of 13.12 dv, minus natural conditions of 4.25 dv). We have reviewed the LDEQ's estimates of the natural visibility impairment at Breton NWA and are proposing to find these estimates acceptable.

### **4. Uniform Rate of Progress**

In setting the RPGs, the LDEQ analyzed and determined the URP needed to reach natural visibility conditions by the year 2064. In so doing, the LDEQ compared the baseline visibility conditions to the natural visibility conditions in Breton NWA and determined the URP needed in order to attain natural visibility conditions by 2064. The LDEQ constructed the URP consistent with the requirements of the RHR and our 2003 Tracking Progress Guidance by plotting a straight graphical line from the baseline level of visibility impairment for 2000-2004 to the level of visibility conditions representing no anthropogenic impairment in 2064 for Breton NWA.

Using a baseline visibility value of 25.73 dv and a "refined" natural visibility value of 11.93 dv for the 20 percent worst days for Breton, the LDEQ calculated the URP to be approximately 0.23 dv per year. This results in a total reduction of 13.80 dv that are necessary to reach the natural visibility condition of 11.93 dv in 2064 for Breton NWA. The URP results in a

visibility improvement of 3.22 dv for Breton for the period covered by this SIP revision submittal (up to and including 2018).

**Table 1. Summary of Uniform Rate of Progress**

<b>Visibility Metric</b>	<b>Breton NWA</b>
Baseline Conditions	25.73 dv
Natural Visibility	11.93 dv
Total Improvement by 2064	13.80 dv
Improvement for this SIP by 2018	3.22 dv
Uniform Rate of Progress	0.23 dv/yr

We are proposing to find that LDEQ has appropriately calculated the URP and has satisfied the requirement in 40 CFR 51.308(d)(1)(i)(B).

### **C. Evaluation of Louisiana's Reasonable Progress Goals**

We are proposing to find that Louisiana's RPGs meet some federal requirements, but also contain some deficiencies. This section discusses three RPG requirements as they relate to the LA RH SIP: 1) establishment of the RPG; 2) reasonable progress four factor analysis; and 3) reasonable progress consultation. See the TSD for a more detailed discussion of RPG requirements and the LA RH SIP for RPGs. The establishment of RPGs and the reasonable progress four factor analysis for Louisiana are linked to the EPA's CAIR and the Transport Rule. As discussed in the Executive Summary above, in an earlier proposed action the EPA proposed a limited disapproval of the LA RH SIP (76 FR 82219). As discussed in that proposal, a number of states, including Louisiana, fully consistent with the EPA's regulations at the time, relied on the trading programs of the CAIR to satisfy the BART requirement and the requirement for a long-term strategy sufficient to achieve the state-adopted reasonable progress goals. Louisiana also

relied on the CAIR in assessing the need for emissions reductions from EGUs to ensure reasonable progress. As a result, Louisiana will have to consider whether EGUs previously covered by the CAIR, whether subject to BART or not, should be controlled to ensure reasonable progress.<sup>17</sup>

We are proposing to find that the State's RPGs are deficient given our proposed finding, discussed in section IV.D. below, that certain of Louisiana's BART determinations are not fully approvable. In general, the State followed the requirements of 40 CFR 51.308(d)(1), but these goals do not reflect appropriate emissions reductions from BART.

### **Establishment of the Reasonable Progress Goals**

The LDEQ adopted the CENRAP modeled 2018 visibility conditions as the RPGs for Breton NWA Class I area. The LDEQ established a RPG of 22.51 dv for Breton for 2018 for the 20% worst days. This represents a 3.22 dv improvement over a baseline of 25.73 dv.

The CENRAP's projections for 2018 for the 20% worst and best days for Breton, which Louisiana used in developing its RPGs for Breton, are shown in the LA RH SIP Appendix B titled, "Technical Support Document for CENRAP Emissions and Air Quality Modeling to Support Regional Haze State Implementation Plans."<sup>18</sup> A comparison of the LDEQ's predicted rate of progress to the glide path on the 20% worst days shows that, with projected control of Louisiana sources, Louisiana will be very close to the glide path throughout the first planning period.<sup>19</sup> The CENRAP modeling shows that for the 20% best days, there would be a 0.90 dv improvement in visibility from the baseline for Breton. *See*, 40 CFR 51.308(d)(1).

---

<sup>17</sup> Because the Transport Rule will result in greater emission reductions overall than the CAIR, the EPA did not include the RPGs set by affected states in its December 30, 2011 limited disapproval (*Transport Better than BART* proposal, December 30, 2011, 76 FR 82219).

<sup>18</sup> The TSD for CENRAP Emissions and Air Quality Modeling to Support RH State Implementation is found in Appendix B of the Louisiana RH SIP.

<sup>19</sup> See the LA RH SIP submittal, Chapter 8, Section 8.5, Figure 8.2.



### **LDEQ's Reasonable Progress "Four Factor" Analysis**

In establishing RPGs for a Class I area, the State is required by CAA §169A(g)(1) and 40 CFR 51.308(d)(1)(i)(A) to "[c]onsider the costs of compliance, the time necessary for compliance, the energy and non-air quality environmental impacts of compliance, and the remaining useful life of any potentially affected sources, and include a demonstration showing how these factors were taken into consideration in selecting the goal." In addition to this explicit statutory requirement, the RHR also establishes an analytical requirement to ensure that each state considers carefully the suite of emission reduction measures necessary to attain the URP. The RHR provides that the EPA will consider both the state's consideration of the four factors in 40 CFR 51.308(d)(1)(i)(A) and its analysis of the URP "[i]n determining whether the State's goal for visibility improvement provides for reasonable progress." 40 CFR 51.308(d)(1)(iii). As explained in the preamble to the RHR, the URP analysis was adopted to ensure that states use a common analytical framework and to ensure an informed and equitable decision making process to ensure a transparent process that would, among other things, ensure that the public would be provided with the information necessary to understand the emission reductions needed, the costs of such measures, and other factors associated with improvements in visibility. 64 FR at 35733.

In establishing its RPGs for 2018 for the 20% worst days, the LDEQ relied on the improvements in visibility that were anticipated to result from federal, State, and local control programs that were either currently in effect or with mandated future-year emission reduction schedules that predate 2018, including BART emission limitations projected by the LDEQ. Based on the emissions reductions from these measures, the CENRAP modeled the projected visibility conditions anticipated at each Class I area in the region in 2018, and the LDEQ used

these results to establish RPGs.

States do have discretion in setting RPGs, but are required to do more than establish RPGs that meet or exceed the URP. The LDEQ did provide an analysis that considered the four statutory factors under 40 CFR 51.308(d)(1)(i)(A) to evaluate the potential of controlling certain sources or source categories for addressing visibility impacts from man-made sources within its borders.

The LDEQ provides an analysis in Appendix H, CENRAP Regional Control Strategy Analysis Plan, showing that the URP goals are reasonable. In addition, the LDEQ provided a discussion of the four factors required for this analysis: costs of compliance, time for compliance, energy and non-air quality environmental impacts of compliance, and remaining useful life of any potentially affected sources in Chapter 10 of the RH SIP.

In identifying and prioritizing potential regional haze control strategies, the LDEQ referenced the Alpine Geophysics report for the CENRAP. Table 7-4 of this report outlines potential facilities that could be considered when developing a subregional SO<sub>2</sub> control strategy with the associated approximate costs (see the LA RH SIP Appendix H). TSD Table 4 shows the facilities in Louisiana identified in the Alpine report that potentially significantly impact visibility at Breton for which controls may be available. The LDEQ found that significant reductions would be achieved from consent decrees and the CAIR, and further examined the sources in Louisiana identified in the Alpine report for potential reductions. More information about the state's discussion is available in section IV.C of the TSD and in the LA RH SIP submittal.

## **Reasonable Progress Consultation**

The LDEQ worked with the Visibility Improvement - States and Tribal Associations of the Southeast (VISTAS) and the CENRAP states to jointly develop the consultation strategy. The LDEQ used the CENRAP as the main vehicle for facilitating collaboration with FLMs and other states in developing its RH SIP. The LDEQ was able to use the CENRAP generated products, such as regional photochemical modeling results and visibility projections, and source apportionment modeling to assist in identifying neighboring states' contributions to the visibility impairment at Breton NWA.

The LDEQ determined that in addition to Louisiana, the following states make a contribution to decreased visibility in Louisiana's Class I area: Mississippi, Alabama, and Florida (see Table 5 of the TSD for this proposal). The LDEQ conducted consultations in the form of face-to-face meetings and conference calls. Participants in the consultation process included states and tribes, the CENRAP and other RPOs, the EPA, and FLMs. The participating states determined that regional modeling and other findings based on existing and proposed controls arising from local, state, and federal requirements indicated that the Class I area in Louisiana is expected to meet the rate of progress goals for the first implementation period ending in 2018. The LDEQ determined that additional emissions reductions from other states were not necessary to address visibility impairment at Breton for the first implementation period ending in 2018, and all states participating in its consultations agreed with this.

#### **D. Evaluation of Louisiana's BART Analyses**

BART is an element of Louisiana's LTS for the first implementation period. As discussed in more detail in section III.D of this proposal, the BART evaluation process consists of three components: (1) an identification of all the BART-eligible sources; (2) an assessment of whether

those BART-eligible sources are subject to BART; and (3) a determination of any BART controls. The LDEQ addressed these steps as follows:

## **1. Identification of BART-Eligible Sources**

An initial step of a BART evaluation is to identify all the BART-eligible sources within the state's boundaries. The LDEQ identified the BART-eligible sources in Louisiana by utilizing the three eligibility criteria in the BART Guidelines (70 FR 39158) and our regulations (40 CFR 51.301): (1) one or more emission units at the facility fit within one of the 26 categories listed in the BART Guidelines; (2) the emission unit(s) began operation on or after August 6, 1962, and was in existence on August 6, 1977; and (3) potential emissions of any visibility-impairing pollutant from subject units are 250 tpy or more.

The LDEQ determined that the visibility-impairing pollutants in Louisiana include SO<sub>2</sub>, NO<sub>x</sub>, and PM, using PM less than 10 microns in diameter (PM<sub>10</sub>) as an indicator for PM (LA RH SIP, Chapter 9, p. 36). This is consistent with the RHR (40 CFR 51 Appendix Y, III.A.2). See the TSD for more information.

The LDEQ sent a letter and survey form, together with guidance materials, requesting information about BART eligibility to every reporter (1167 facilities) to the emissions inventory for the state requesting information about BART eligibility. Of the 1167 facilities contacted, 1165 facilities responded, and reported 76 BART-eligible facilities. Of the two non-responders, one was found to be out of business, and the other was determined to have minor emissions. See the TSD for more information. Each of the 76 BART-eligible facilities is identified in Table 6 of the TSD. We agree with the LDEQ's identification of BART-eligible sources.

## 2. Identification of Sources Subject to BART

The next step of the BART evaluation is to identify those BART-eligible sources that may reasonably be anticipated to cause or contribute to any visibility impairment at any Class I area, i.e. those sources that are subject to BART. The BART Guidelines allow states to consider exempting some BART-eligible sources from further BART review because they may not reasonably be anticipated to cause or contribute to any visibility impairment in a Class I area. Following the identification of those sources that were determined to be BART eligible, the LDEQ performed a combination approach to determine whether BART-eligible sources would cause or contribute to visibility impairment at Breton. The LDEQ used a combination of an individual source attribution approach (dispersion modeling), and, for sources with common characteristics, a model plant approach.<sup>20</sup> Please see the TSD and Appendix A of the TSD for more details regarding how sources were exempted from BART by the LDEQ and our analysis of this modeling.

Louisiana considered each of the 76 BART-eligible facilities described earlier using the modeling methodologies described below.

### Modeling Methodology

The BART Guidelines direct states to address SO<sub>2</sub>, NO<sub>x</sub> and PM emissions as visibility-impairing pollutants, and states must exercise their “best judgment to determine whether ammonia or VOC emissions from a source are likely to have an impact on visibility in an area.” *See*, 70 FR 39162. As noted above, the LDEQ determined that the visibility-impairing pollutants in Louisiana are SO<sub>2</sub>, NO<sub>x</sub>, and particulate matter. Louisiana decided to not consider VOCs and

---

<sup>20</sup> The “model plant” approach can be used to determine whether a category of sources that share specific characteristics should be exempted from BART because these sources are not anticipated to cause or contribute to visibility impairment at a Class I area. *See* 40 CFR 51 Appendix Y.III.

ammonia among visibility-impairing pollutants for several reasons, as discussed in the TSD. We propose to accept the State's decision to address only SO<sub>2</sub>, NO<sub>x</sub>, and PM as the visibility impairing pollutants.

Consistent with BART Guidelines, the LDEQ used the CALPUFF modeling system to determine whether individual sources identified as BART-eligible were subject to or exempt from BART. For this modeling, Louisiana considered 76 BART-eligible facilities, as discussed in section IV.D.1. Based on this analysis, Louisiana identified 27 facilities for further consideration due to visibility impact above a 0.5 dv contribution threshold. These facilities are discussed in the next section of this action and are identified in Table 7 of the TSD. We are proposing to find the LDEQ's chosen modeling methodology and screening approach are acceptable.

For states using modeling to determine the applicability of BART to single sources, the BART Guidelines note that an important step is to set a contribution threshold to assess whether the impact of a single source is sufficient to cause or contribute to visibility impairment at a Class I area. The BART Guidelines state that, "[a] single source that is responsible for a 1.0 deciview change or more should be considered to 'cause' visibility impairment." 70 FR 39104, 39161. The BART Guidelines also state that "the appropriate threshold for determining whether a source contributes to visibility impairment 'may reasonably differ across states,' but '[a]s a general matter, any threshold that you use for determining whether a source 'contributes' to visibility impairment should not be higher than 0.5 deciviews." *Id.* Further, in setting a contribution threshold, states should "consider the number of emissions sources affecting the Class I areas at issue and the magnitude of the individual sources' impacts." The Guidelines affirm that states are free to use a lower threshold if they conclude that the location of a large

number of BART-eligible sources in proximity of a Class I area justifies this approach.

Considering the number of sources affecting Louisiana's Class I area and the magnitude of each source's impact, the LDEQ used a contribution threshold of 0.5 dv for determining which sources are subject to BART. We propose to accept the State's selection of 0.5 dv as the threshold value.

For the 27 facilities referenced above, Louisiana requested that the facilities provide additional modeling: Screening Modeling and, for sources that failed the Screening Modeling, Refined Modeling. Those facilities that the LDEQ requested to conduct this additional modeling and the results of the individual Screening and Refined Modeling analyses for each of these sources are shown in Table 7 of the TSD.<sup>21</sup> Our evaluation of these modeling results showed that there was one facility, Mosaic Fertilizer Uncle Sam Plant (Mosaic), which had modeled visibility impacts that exceeded the 0.5 dv contribution threshold, but which the LDEQ determined was not subject to BART. At the time of the submittal, the LDEQ's modeling showed that, using then-current permit maximum hourly emission rates, Mosaic had an operating emissions rate of 2,250 lbs/hr (maximum) and a significant modeled visibility impact at Breton of over 0.5 dv. At that time, Mosaic was reviewing possibilities for future control strategies on the A-Train Sulfuric Acid Stack that could be expected to reduce SO<sub>2</sub> emissions for the facility. For purposes of performing a refined modeling analysis and exempting the source from BART requirements, Mosaic considered potential future emission rates based on future controls, and used a modeling data input of 258.3 lbs/hr (maximum). Although future controls were being considered, they were not yet in place. The RHR states that a source can be exempted if its visibility impacts at the time the SIP is developed are less than the screening value. *See*, 70 FR 39118. Because

---

<sup>21</sup> The LDEQ provided screening modeling results for all sources identified as BART-eligible; see Appendix E of the LA RH SIP submission.

Mosaic's impacts were greater than the screening value, at that time, the LDEQ should have completed a full five factor analysis to assure the appropriate BART level of control was implemented (as discussed in section IV.D.3). Therefore, we propose to find that the LDEQ erred in exempting the Mosaic facility from BART. For those facilities for which Screening and Refined Modeling was provided, with the exception of Mosaic, we propose to approve the modeling in the LA RH SIP submittal that identifies which sources are exempt from BART.

### Sources Subject to BART

The sources that were not exempt from the BART requirements via dispersion modeling analyses and/or the use of model plants are subject to BART. For sources subject to BART in Louisiana, the LDEQ must make a determination of BART. The LDEQ identified three sources as subject to BART and we identified one more, Mosaic, as discussed previously in this proposal. All four of these sources are shown in Table 2.

**Table 2. Non-EGU Sources in Louisiana Subject to BART**

<b>Facility Name</b>	<b>BART Emission Units</b>	<b>Source Category</b>	<b>Pollutants Evaluated</b>
ConocoPhillips Co. Alliance Refinery	Various emission points in facility	Petroleum Refinery	SO <sub>2</sub>
			NO <sub>x</sub>
			PM <sub>10</sub>
Rhodia, Inc.	Sulfuric Acid Units 1 and 2	Sulfuric Acid	SO <sub>2</sub>
Sid Richardson Carbon Company	Units 1,2, and 3 flares and dryers 2,3 and 4	Carbon Black	SO <sub>2</sub>
Mosaic Fertilizer Uncle Sam Plant*	Various emission points in facility*	Chemical Process Facility*	None*

\*This facility was identified by EPA as subject to BART.



Louisiana did not submit source-specific BART evaluations for EGUs in its analysis because the state chose to meet BART requirements for EGUs for SO<sub>2</sub> and NO<sub>x</sub> by participation in the CAIR, and because modeling results showed that the PM emissions from EGUs did not warrant further control. This is discussed further in the next section.

### **3. BART Determinations**

The next component of a BART evaluation is to perform the BART analysis. BART is a source-specific control determination, based on consideration of several factors set out in section 169A(g)(2) of the CAA. These factors include the costs of compliance and the degree of improvement in visibility associated with the use of possible control technologies. The EPA issued BART Guidelines (Appendix Y to Part 51) in 2005 to clarify the BART provisions based on the statutory and regulatory BART requirements (70 FR 39164). The BART Guidelines describe the BART analysis as consisting of the following five basic steps:

- Step 1: Identify All Available Retrofit Control Technologies,
- Step 2: Eliminate Technically Infeasible Options,
- Step 3: Evaluate Control Effectiveness of Remaining Control Technologies,
- Step 4: Evaluate Impacts and Document the Results, and
- Step 5: Evaluate Visibility Impacts.

We note the BART Guidelines provide that states must follow the guidelines in making BART determinations on a source-by-source basis for 750 MW power plants but are not required to use the process in the guidelines when making BART determinations for other types of sources. States with subject-to-BART units with a generating capacity less than 750 MW are

strongly encouraged to follow the BART Guidelines in making BART determinations, but they are not required to do so. However, the requirement to perform a BART analysis that considers “the technology available, the costs of compliance, the energy and nonair quality environmental impacts of compliance, any pollution control equipment in use at the source, the remaining useful life of the source, and the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology,” is found in 40 CFR 51.308(e)(1)(ii)(A) and the RHR, and applies to all subject-to-BART sources.

For three facilities, ConocoPhillips Co., Rhodia Inc., and Sid Richardson Carbon Company, the LDEQ submitted a BART analysis under 40 CFR 51.308(e)(1)(ii)(A). For each of these facilities, we propose to find that the BART analysis satisfies part of the requirements, but does not satisfy all of the requirements. A summary of our proposed findings for these facilities is provided below. For more details, please see our evaluation of the BART determination for each subject-to-BART unit, in the TSD.

As previously discussed, we are proposing to find that the state should have identified Mosaic as being subject to BART and made a BART determination for the source. This is discussed in more detail in section IV.D.2 of this action.

Also, as discussed in the Executive Summary above, in an earlier proposed action EPA proposed a limited disapproval of the LA RH SIP (76 FR 82219). EPA’s proposed limited disapproval is based on deficiencies in the LA RH SIP submittal arising from the state’s reliance on the CAIR to meet certain regional haze requirements. States such as Louisiana that are subject to the requirements of the Transport Rule trading program only for NO<sub>x</sub> must still address BART for EGUs for SO<sub>2</sub> and other visibility impairing pollutants. *See*, 76 FR at 82224. While we proposed on December 30, 2011 to issue a FIP to address the deficiencies in Louisiana’s SIP

associated with the BART requirements for NO<sub>x</sub> for EGUs, we did not propose a FIP to address the deficiencies associated with the BART requirements for SO<sub>2</sub>. Louisiana also relied on the CAIR in assessing the need for emissions reductions for SO<sub>2</sub> from EGUs to satisfy BART requirements. Consequently, Louisiana will have to re-evaluate EGUs with respect to SO<sub>2</sub> BART requirements.

#### **a. ConocoPhillips**

The ConocoPhillips Alliance Refinery is a petroleum refinery near Belle Chasse Louisiana and is a subject-to-BART source. On December 5, 2005, ConocoPhillips and the EPA entered into a Consent Decree (CD).<sup>22</sup> The BART engineering analysis, provided by ConocoPhillips utilized emission reductions that are mandated per the CD for the fluidized catalytic cracker, the process refinery flares and the crude unit heater. Implementing these control projects per the CD emissions reductions will result in reducing the overall site visibility impacts. The visibility improvements resulting from this CD are discussed further in the TSD. However, the LDEQ did not provide a complete BART evaluation for these units. The submittal does not analyze controls for these units using the five steps as required by 40 CFR 51.308(e). Also, no emissions limits for BART for these units were included in the LA RH SIP. Therefore, for the units covered by the CD, the LDEQ must provide BART analyses for the units to meet BART requirements (40 CFR 51.308(e)(1)(ii)(A)).<sup>23</sup> Also, a unit's BART emissions limits must

---

<sup>22</sup> Civil Action No. H-05-0285. A copy of this CD is available in the docket for this rulemaking.

<sup>23</sup> The EPA recently finalized action approving New Jersey's BART determinations for the ConocoPhillips Bayway Refinery, which is subject to the same CD as the ConocoPhillips Alliance Refinery. *See* <http://www.epa.gov/compliance/resources/cases/civil/caa/conocophillips.html>. The proposal for that action explains that the EPA's approval is based on New Jersey's submittal of a complete BART evaluation for the subject-to BART units at the facility, and the fact that these units will be controlled "based on maximum feasible controls or a multi-factor analysis." 76 FR 49711, at 49721; *see also*, 77 FR 19-01. The TSD for that action describes how New Jersey's submittal included the BART analysis for NO<sub>x</sub>, SO<sub>2</sub>, and PM for the subject-to-

be a part of the RH SIP, and therefore the LDEQ must include the BART emissions limits in the RH SIP through a SIP revision.<sup>24</sup> We propose to find that the BART determination for ConocoPhillips Alliance Refinery is deficient at this time.

There are several other units subject to BART at the ConocoPhillips Alliance facility. These include the cooling water tower and gas-fired heaters. Louisiana provided a BART analysis for these as follows: cooling water tower for PM and PM<sub>10</sub>, and process heaters for NO<sub>x</sub>. For these units, ConocoPhillips determined, and the LDEQ agreed that there was not a cost effective control. We are proposing to accept the LDEQ's BART analysis that no additional controls are required to meet BART for these units.

For three other units, the emissions of PM, SO<sub>2</sub>, and NO<sub>x</sub> are minimal; so, the potential visibility improvement from controls on these units is also minimal. These units are the Product Dock No. 1 MVR Loading, the Product Dock No. 2 MVR Loading, and Coke Transfer and Storage. For detailed information, see the TSD section IV.D.3.a.iii and TSD Appendix A. The installation of any additional controls would likely achieve negligible emissions reductions, have almost no visibility impact on Breton, and would not be cost-effective.<sup>25</sup> We propose to find that the LDEQ's analysis for these units is adequate to meet BART requirements.

---

BART units at this source in compliance with 40 CFR 51.308(e)(1)(ii)(A). TSD, pages 27-29, *available at* <http://www.regulations.gov>, Docket number EPA-R02-OAR-2011-0607.

<sup>24</sup> The CAA requires RH SIPs to "to contain such emission limits. . . necessary to make reasonable progress toward meeting the national goal. . . ." CAA 169A(b)(2). The federal regulations further explain that the state must "submit an implementation plan containing emission limits representing BART and schedules for compliance with BART for each BART-eligible source that may reasonably be anticipated to cause or contribute to any impairment of visibility in any mandatory Class I Federal area." 40 CFR 51.308(e). Finally, the preamble to the RHR states that "[t]he SIP revision must include the emission limitations determined to be BART for sources subject to BART . . . ." 64 FR 35714, at 35741.

<sup>25</sup> "Consistent with the CAA and the implementing regulations, States can adopt a more streamlined approach to making BART determinations where appropriate. Although BART determinations are based on the totality of circumstances in a given situation, such as the distance of the source from a Class I area, the type and amount of pollutant at issue, and the availability and cost of controls, it is clear that in some situations, one or more factors will clearly suggest an outcome. Thus, for example, a State need not undertake an exhaustive analysis of a source's impact on visibility resulting from relatively minor emissions of a pollutant where it is clear that controls would be costly and any improvements in visibility resulting from reductions in emissions of that

## **b. Rhodia**

The Rhodia Sulfuric Acid plant is located in Baton Rouge. The Rhodia Sulfuric Acid plant produces sulfuric acid by using two sulfuric acid production trains, Unit 1 and Unit 2. Unit 1 was constructed in 1953, and at the time of the SIP submittal, had a production rate of 700 tons of sulfuric acid per day (700 tons sulfuric acid/day). Although Rhodia Unit 1 was constructed outside the dates for BART-eligibility, the LDEQ identified it as BART-eligible. Therefore, we treat it as BART-eligible and have included this unit in the subject-to-BART discussion in this section.<sup>26</sup> We request comments on whether this unit should be treated as BART-eligible. Unit 2 was constructed in 1968, and has a production rate of 1500 tons sulfuric acid/day. Therefore, Unit 2 is an “existing stationary facility” for purposes of BART eligibility, as defined in 40 CFR 51.301.

Effective July 23, 2007, the EPA, LDEQ and other parties entered into a CD with Rhodia requiring a scrubber to be installed on each of the units to control SO<sub>2</sub> emissions.<sup>27</sup> The BART engineering analysis assumed emission reductions that have since been mandated per the CD for Units 1 and 2. As stated above, without controls, the BART screening modeling for Rhodia showed a visibility impact at Breton of greater than 0.5 dv. Implementing control projects per the CD emissions reductions will result in reducing the overall site visibility impacts, and based on modeling with controls the LDEQ expects the visibility impairment from Rhodia to be below 0.5

---

pollutant would be negligible. In a scenario, for example, where a source emits thousands of tons of SO<sub>2</sub> but less than one hundred tons of NO<sub>x</sub>, the State could easily conclude that requiring expensive controls to reduce NO<sub>x</sub> would not be appropriate. In another situation, however, inexpensive NO<sub>x</sub> controls might be available and a State might reasonably conclude that NO<sub>x</sub> controls were justified as a means to improve visibility despite the fact that the source emits less than one hundred tons of the pollutant.” 70 FR 39116.

<sup>26</sup> We note it is possible for a source to have been constructed prior to the BART eligibility timeframe of August 7, 1962 to August 7, 1977, but to have been reconstructed during that timeframe and thus still BART-eligible. 70 FR 39159-60.

<sup>27</sup> Civil Action No. 2:07CV134 WL. A copy of this CD is available in the docket for this rulemaking.

dv at Breton. The visibility improvements resulting from this CD are discussed in the TSD. However, the LDEQ did not submit a complete BART evaluation for these units. The submittal does not analyze controls for the units using the five steps as required by 40 CFR 51.308(e). In order to satisfy BART requirements for SO<sub>2</sub>, Louisiana must provide a BART analysis. The LDEQ may be able to find that the controls required under the CD are among the most stringent, and therefore, no additional controls would be required for these units to meet BART. 40 CFR 51 Appendix Y.IV.D.1.9. Also, the emissions limits for Rhodia's subject-to-BART units were not included in the RH SIP revision, so the LDEQ must include the BART emission limits in the RH SIP through a SIP revision.<sup>28</sup> We propose to find that the BART determination for Rhodia is deficient at this time.

The visibility impact due to NO<sub>x</sub> and PM emissions from Rhodia's two subject-to-BART units is minimal; so, the potential visibility improvement from controls on these units is also minimal. For detailed information, see the TSD section IV.D.3.b and TSD Appendix B. The installation of any additional controls would likely achieve negligible emissions reductions, have almost no visibility impact on Breton, and would not be cost-effective.<sup>25</sup> We propose to find the LDEQ's analysis for these pollutants is adequate to meet BART requirements.

### **c. Sid Richardson Carbon Company**

The Sid Richardson Carbon Company is a subject-to-BART source located in West Baton Rouge Parish. For the subject-to-BART units at the Sid Richardson facility, Sid Richardson/LDEQ submitted a BART engineering analysis. For PM, the LDEQ determined that the high efficiency fabric filters already in use at the facility are BART. We propose to find that

---

<sup>28</sup> CAA 169A(b)(2); 40 CFR 51.308(e); and 64 FR 35714, at 35741.

the state acted within its discretion in making this determination, and that the PM analyses provided by the LDEQ and Sid Richardson meet BART requirements.

For NO<sub>x</sub>, the LA RH SIP Chapter 9 states that the Sid Richardson engineering analyses included the potential installation of NO<sub>x</sub> add-on controls, but it determined that all were infeasible (there were no demonstrated NO<sub>x</sub> scrubbing technologies at any carbon black plants). However, there is not sufficient information in the LA RH SIP submittal to support the BART analysis conclusion that no controls are feasible. We propose to find that the NO<sub>x</sub> BART determination for Sid Richardson is deficient at this time.

For SO<sub>2</sub>, the LA RH SIP Chapter 9 states that the Sid Richardson engineering analyses included the potential installation of SO<sub>2</sub> add-on controls, but it determined that all were infeasible (there were no demonstrated SO<sub>2</sub> scrubbing technologies at any carbon black plants). However, Appendix G of the LA RH SIP submittal reflects that the SO<sub>2</sub> evaluation for Sid Richardson considered four potential approaches and evaluated them for cost effectiveness: three add-on controls – caustic scrubbing, wet limestone scrubbing, and Haldor Topsoe’s SNOX process, which is a process that removes SO<sub>2</sub>, NO<sub>x</sub> and PM from flue gas; the fourth approach would be to limit the sulfur content of the feedstock oil.<sup>29</sup> The SIP documentation does not reconcile the cost analyses provided with the corresponding conclusion of the technical infeasibility for these same control options. Based on the cost analysis provided, the installation and use of scrubbers to control emissions may be well within a range that is cost effective. Also, the LDEQ indicated that no controls were technically feasible, but the record does not provide a sufficient basis for this conclusion. There is not sufficient information in the LA RH SIP submittal to support the BART analysis conclusion that a scrubber, or other technology, is not

---

<sup>29</sup> LA RH SIP submittal TSD Appendix G, Environ Report, pg 14.

feasible. For these reasons, we propose to find that the SO<sub>2</sub> BART determination for Sid Richardson is deficient at this time.

## **E. Long-Term Strategy**

As described in section III.E of this action, the LTS is a compilation of state-specific control measures relied on by the state for achieving its RPGs. Louisiana's LTS for the first implementation period addresses the emissions reductions from federal, state, and local controls that take effect in the state from the end of the baseline period starting in 2004 until 2018. The Louisiana LTS was developed by the LDEQ, in coordination with the CENRAP RPO, through an evaluation of the following components: (1) construction of a CENRAP 2002 baseline emission inventory; (2) construction of a CENRAP 2018 emission inventory, including reductions from the CENRAP member state controls required or expected under federal and state regulations, (including BART); (3) modeling to determine visibility improvement and apportion individual state contributions; (4) state consultation; and (5) application of the LTS factors.

### **1. Emissions Inventories**

40 CFR 51.308(d)(3)(iii) requires that Louisiana document the technical basis, including modeling, monitoring and emissions information, on which it relied upon to determine its apportionment of emission reduction obligations necessary for achieving reasonable progress in each mandatory Class I Federal area it affects. Louisiana must identify the baseline emissions inventory on which its strategies are based. 40 CFR 51.308(d)(3)(iv) requires that Louisiana identify all anthropogenic sources of visibility impairment considered by the state in developing its long-term strategy. This includes major and minor stationary sources, mobile sources, and



area sources. Louisiana met these requirements by relying on technical analyses developed by its RPO, CENRAP, and approved by all state participants, as described below.

The emissions inventory used in the RH technical analyses was developed by the CENRAP with assistance from Louisiana. The LDEQ provided a statewide emissions inventory for 2002, representing the mid-point of the 2000-2004 baseline period, and a projected emissions inventory for 2018, the end of the first 10-year planning period. The 2018 inventory is based on visibility modeling conducted by the CENRAP. The 2018 emissions inventory was developed by projecting 2002 emissions and applying reductions expected from federal and state regulations affecting the emissions of the visibility-impairing pollutants NO<sub>x</sub>, PM, SO<sub>2</sub>, and VOCs.

#### **a. Louisiana's 2002 Emission Inventory**

The LDEQ and the CENRAP developed an emission inventory for four inventory source classifications: point, area, non-road and on-road mobile sources for the baseline year of 2002. Louisiana's 2002 emissions inventory provides estimates of annual emissions for haze producing pollutants by source category as summarized in Table 3, based on information in Chapter 7 of Louisiana's RH SIP.

**Table 3. Louisiana 2002 Emissions Inventory (tons/year)**

	SO <sub>2</sub>	NH <sub>3</sub>	NO <sub>x</sub>	VOCs	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Point</b>	286,050	9,237	312,634	89,025	73,333	60,899
<b>Area</b>	81,153	75,381	99,060	124,311	245,162	84,068
<b>Non-road mobile</b>	14,324	563	117,250	109,598	10,663	9,791
<b>On-road mobile</b>	4,653	3,748	15,137	64,643	3,563	2,689
<b>Total</b>	<b>386,180</b>	<b>88,929</b>	<b>544,081</b>	<b>387,577</b>	<b>332,721</b>	<b>157,447</b>

See the TSD for details on how the 2002 emissions inventory was constructed. The EPA

approved the 2002 emissions inventory on September 3, 2009 (74 FR 45561). We are proposing to find that Louisiana's 2002 emission inventory is acceptable for the purpose of developing the LTS.

#### **b. Louisiana's 2018 Emission Inventory**

In constructing Louisiana's 2018 emission inventory, the LDEQ used a combination of our Economic Growth Analysis System (EGAS 6), our mobile emissions factor model (MOBILE 6), our off-road emissions factor model (NONROAD), and the Integrated Planning Model (IPM) for electric generating units. The CENRAP developed emissions for five inventory source classifications: point, area, non-road and on-road mobile sources, and biogenic sources. The CENRAP used the 2002 emission inventory, described above, to estimate emissions in 2018. All control strategies expected to take effect prior to 2018 are included in the projected emission inventory. Louisiana's 2018 emissions inventory provides estimates of annual emissions for haze producing pollutants by source category as summarized in Table 4, based on information in Chapter 7 of the Louisiana RH SIP.

**Table 4. Louisiana's 2018 Emissions Inventory**

	<b>SO<sub>2</sub></b>	<b>NH<sub>3</sub></b>	<b>NO<sub>x</sub></b>	<b>VOCs</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>
<b>Point</b>	354,087	14,435	269,215	187,741	73,136	60,899
<b>Area</b>	87,538	36,896	114,374	117,600	16,936	14,536
<b>Non-road mobile</b>	11,584	72	106,685	64,294	8,670	7,955
<b>On-road mobile</b>	561	5,436	44,806	30,340	1,191	1,191
<b>Total</b>	<b>453,770</b>	<b>56,839</b>	<b>535,080</b>	<b>399,975</b>	<b>99,933</b>	<b>84,581</b>

See the TSD for details on how the 2018 emissions inventory was constructed. The CENRAP and LDEQ used this and other state's 2018 emission inventories to construct visibility

projection modeling for 2018. We are proposing to find that Louisiana's 2018 emission inventory is acceptable.

## **2. Visibility Projection Modeling**

The CENRAP performed modeling for the RH LTS for its member states, including Louisiana. The modeling analysis is a complex technical evaluation that began with selection of the modeling system. The CENRAP used (1) the Mesoscale Meteorological Model (MM5) meteorological model, (2) the Sparse Matrix Operator Kernel Emissions (SMOKE) modeling system to generate hourly gridded speciated emission inputs, (3) the Community Multiscale Air Quality (CMAQ) photochemical grid model and (4) the Comprehensive Air Quality model with extensions (CAMx), as a secondary corroborative model. The CAMx was also utilized with its Particulate Source Apportionment Technology (PSAT) tool to provide source apportionment for both the baseline and future case visibility modeling.

The photochemical modeling of RH for the CENRAP states for 2002 and 2018 was conducted on the 36-km resolution national regional planning organization domain that covered the continental U.S., portions of Canada and Mexico, and portions of the Atlantic and Pacific Oceans along the east and west coasts. The CENRAP states' modeling was developed consistent with our guidance.<sup>30</sup>

The CENRAP examined the model performance of the regional modeling for the areas of interest before determining whether the CMAQ model results were suitable for use in the RH assessment of the LTS and for use in the modeling assessment. The 2002 modeling efforts were

---

<sup>30</sup> Guidance on the Use of Models and Other Analyses for Demonstrating Attainment of Air Quality Goals for Ozone, PM<sub>2.5</sub>, and Regional Haze, (EPA-454/B-07-002), April 2007, located at <http://www.epa.gov/scram001/guidance/guide/final-03-pm-rh-guidance.pdf>. Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations, August 2005, updated November 2005 ("our Modeling Guidance"), located at <http://www.epa.gov/ttnchie1/eidocs/eiguid/index.html>, EPA-454/R-05-001.

used to evaluate air quality/visibility modeling for a historical episode—in this case, for calendar year 2002—to demonstrate the suitability of the modeling systems for subsequent planning, sensitivity, and emissions control strategy modeling. Model performance evaluation is performed by comparing output from model simulations with ambient air quality data for the same time period to determine whether the model’s performance is sufficiently accurate to justify using the model for simulating future conditions. Once the CENRAP determined the model performance to be acceptable, it used the model to determine the 2018 RPGs using the current and future year air quality modeling predictions, and compared the RPGs to the URP. The results of the CENRAP’s visibility projection modeling are discussed in the section that follows. We are proposing to find that Louisiana’s visibility projection modeling is acceptable.

### **3. Sources of Visibility Impairment**

Where Louisiana causes or contributes to impairment in a mandatory Class I Federal area, it must demonstrate that it has included in its SIP all measures necessary to obtain its share of the emission reductions needed to meet the progress goal for the area. If Louisiana has participated in a regional planning process, it must ensure it has included all measures needed to achieve its apportionment of emission reduction obligations agreed upon through that process. 40 CFR 51.308(d)(3)(ii) requires that, “Where other states cause or contribute to impairment in a . . . Class I area, the state must demonstrate that it has included . . . all measures necessary to obtain its share of the emissions reductions needed to meet the progress goal for the area. If the state has participated in a regional planning process, the state must ensure it has included all measures needed to achieve its apportionment of emission reduction obligations agreed upon through that process.”

The CENRAP used CAMx with its PSAT tool to provide source apportionment by geographic region and major source category. The pollutants causing the highest levels of light extinction are associated with the sources causing the most visibility impairment.

#### **a. Sources of Visibility Impairment in the Breton Class I Area**

Visibility impairment at Breton in 2002 on the worst 20% days is primarily (69%) due to point source emissions that contribute 77.7 inverse megameters<sup>31</sup> ( $\text{Mm}^{-1}$ ) of the total extinction of 122.1  $\text{Mm}^{-1}$ . The largest contributions come from inside the state. In 2018, point sources continue to contribute the most to visibility impairment at Breton, even though this contribution has decreased substantially. “The top five contributing source groups to 2018 visibility impairment at [Breton] for the worst 20 percent days are: Louisiana Elevated Point Sources; Boundary Conditions;<sup>32</sup> East Elevated Point Sources; Gulf of Mexico Area Sources; and Louisiana Area Sources. Gulf of Mexico Area sources include off shore shipping and oil and gas development emissions.”<sup>33</sup> We are proposing to find that Louisiana’s identification of sources of visibility impairment for the Breton Class I area is acceptable.

#### **b. Louisiana’s Contribution to Visibility Impairment in Class I Areas Outside the State**

Table 5 shows the CENRAP CAMx and PSAT modeled contributions (in percentage of visibility impacts) to total extinction at all Class I areas from Louisiana sources for 2002 and 2018, respectively. The CAMx PSAT results were utilized to evaluate the impact of Louisiana emission sources in 2002 and 2018 on visibility impairment at Class I areas outside of the state.

---

<sup>31</sup> An inverse megameter is the direct measurement unit for visibility impairment data. It is the amount of light scattered and absorbed as it travels over a distance of one million meters. Deciviews (dv) can be calculated from extinction data as follows:  $dv = 10 \times \ln(b_{\text{ext}}(\text{Mm}^{-1})/10)$ .

<sup>32</sup> “Boundary Conditions” means “the assumed concentrations along the later edges of the 36 km modeling domain.” LA RH SIP submittal Appendix B, Environ Report, p. 1-16.

<sup>33</sup> LA RH SIP submittal Appendix B, Environ Report, p. 5-18.

**Table 5. Percent Contribution from Louisiana Emissions to Total Visibility Impairment at Class I areas on 20% Worst Days**

<b>Class I area</b>	<b>State</b>	<b>2002</b>	<b>2018</b>
Breton (BRET1)	Louisiana	15.75	24.67
Wichita Mountains (WIMO1)	Oklahoma	3.47	4.83
Caney Creek (CACR1)	Arkansas	2.86	4.23
Big Bend NP (BIBE1)	Texas	2.79	3.32
Upper Buffalo Wilderness (UPBU1)	Arkansas	1.80	2.71
Hercules Glades Wilderness (HEGL1)	Missouri	1.71	2.43
Guadalupe Mountains NP (GUMO1)	Texas	1.32	1.57
White Mountain Wilderness (WHIT1)	New Mexico	1.28	1.44
Sipsey Wilderness (SIPS1)	Alabama	0.96	1.78
Salt Creek (SACR1)	New Mexico	0.93	1.07
Mammoth Cave NP (MACA1)	Kentucky	0.67	1.19
Seney (SENE1)	Michigan	0.54	0.77

Bosque del Apache (BOAP1)	New Mexico	0.42	0.48
Great Smoky Mountains NP (GRSM1)	Tennessee	0.40	0.83
Isle Royale NP (ISLE1)	Michigan	0.39	0.49
Badlands NP (BADL1)	South Dakota	0.36	0.41
Cadiz (CADI1)	Kentucky	0.34	0.59
Gila Wilderness (GICL1)	New Mexico	0.30	0.37
Bondville (BOND1)	Illinois	0.27	0.41
Mingo (MING1)	Missouri	0.22	0.33
Bandelier (BAND1)	New Mexico	0.21	0.24
San Pedro Parks (SAPE1)	New Mexico	0.20	0.22
Wind Cave NP (WICA1)	South Dakota	0.14	0.16
Wheeler Peak Wilderness (WHPE1)	New Mexico	0.14	0.16

As shown in the Table above, the largest contribution from Louisiana sources is at the Wichita Mountains Class I area in Oklahoma in both 2002 and 2018. Louisiana is also projected to contribute a small amount of visibility degradation at Class I areas in other states as listed in Table 5. This table summarizes the projected contribution from Louisiana's emissions on visibility degradation to Class I areas for the 20 percent worst days in 2002 and 2018, as modeled

by the CENRAP.<sup>34</sup> We are proposing to find that Louisiana's identification of sources of visibility impairment for Class I areas outside the state is acceptable.

#### **4. Consultation for Other State's Class I Areas**

The LDEQ used the CENRAP as its main vehicle for facilitating collaboration with FLMs and other states in the CENRAP, and the VISTAS for other states outside the CENRAP to satisfy its LTS consultation requirement. This helped the LDEQ and other state agencies analyze emission apportionments at Class I areas and develop coordinated RH SIP strategies.

40 CFR 51.308(d)(3)(i) requires that Louisiana consult with other states if its emissions are reasonably anticipated to contribute to visibility impairment at that state's Class I area(s), and that Louisiana consult with other states if those states' emissions are reasonably anticipated to contribute to visibility impairment at Breton NWA. The LDEQ's consultations with other states are described in section IV.C.3 of this action. The CENRAP visibility modeling demonstrates Louisiana sources are responsible for a visibility extinction of approximately  $3.5 \text{ Mm}^{-1}$  at Caney Creek on the worst 20% days for 2002.<sup>26</sup> The LDEQ consulted with Arkansas as well as Oklahoma, Texas, Mississippi, Alabama, and Florida whose emissions have a potential visibility impact at Breton. We are proposing to find that the LDEQ's consultations satisfy the requirements under 40 CFR 51.308(d)(3)(i).

#### **5. Mandatory Long-Term Strategy Factors**

40 CFR 51.308(d)(3)(v) requires that Louisiana consider certain factors in developing its long-term strategy (the LTS factors). These include: (a) emission reductions due to ongoing air

---

<sup>34</sup> See Appendix A of the TSD for this proposal for the CENRAP Emissions and Air Quality Modeling to Support Regional Haze State Implementation, as well as Appendix B of the LA RH SIP.



pollution control programs, including measures to address RAVI; (b) measures to mitigate the impacts of construction activities; (c) emissions limitations and schedules for compliance to achieve the reasonable progress goal; (d) source retirement and replacement schedules; (e) smoke management techniques for agricultural and forestry management purposes including plans as currently exist within the state for these purposes; (f) enforceability of emissions limitations and control measures; and (g) the anticipated net effect on visibility due to projected changes in point, area, and mobile source emissions over the period addressed by the long-term strategy. For the reasons outlined below, we are proposing to find that Louisiana has satisfied some, but not all of the requirements of 40 CFR 51.308(d)(3)(v). Also, Louisiana will have to consider whether EGUs previously covered by the CAIR, whether subject to BART or not, should be controlled to ensure reasonable progress.

**a. Reductions Due to Ongoing Air Pollution Programs**

In addition to its BART determinations, Louisiana's LTS incorporates emission reductions due to a number of ongoing air pollution control programs.

The LDEQ considered the Tier 2 Vehicle Emission Standards in developing its LTS. Federal Tier 2 Vehicle Emission Standards for passenger cars and light trucks were fully implemented in 2009 and similar rules for heavy trucks were also implemented by 2009. These federal standards will result in reductions of emissions of PM, ozone precursors, and non-methane organic compounds. In developing its LTS, the LDEQ also considered the Highway Diesel and Nonroad Diesel Rules, which mandated the use of lower sulfur fuels in diesel engines beginning in 2006 for highway diesel fuel, and 2007 for non-road diesel fuel. These federal rules have resulted in more effective control of PM emissions from diesel engines by allowing the

installation of control devices that were technically infeasible for fuels with higher sulfur content. In addition, the state will rely on federal consent decrees and implementation of the 2008 ozone standard.

As noted in the EPA's separate notice proposing revisions to the RHR (76 FR 82219) a number of states, including Louisiana, fully consistent with the EPA's regulations at the time, relied on the trading programs of the CAIR to satisfy the BART requirement and the requirement for a long-term strategy sufficient to achieve the state-adopted reasonable progress goals. In that notice, we proposed a limited disapproval of Louisiana's long-term strategy and, for that reason, we are not taking action on the long-term strategy in this proposal insofar as Louisiana's RH SIP relied on the CAIR. The docket for that rulemaking is available at Docket ID No. EPA-HQ-OAR-2011-0729. Louisiana's LTS is also deficient because it relied on deficient non-EGU BART determinations as discussed in section IV.D of this action.

#### **b. Measures to Mitigate the Impacts of Construction Activities**

40 CFR 51.308(d)(3)(v)(B) requires that Louisiana consider measures to mitigate the impacts of construction activities in developing its LTS. Construction-related activities are believed to be a small contributor to fine and coarse particulates in Louisiana. The LDEQ notes that Louisiana may require visibility monitoring in any Class I area where preconstruction and post-construction of any new source or major modification may have an adverse impact on visibility in any Class I area (LAC 33:III.504.E.3.b). In spite of a great deal of construction activity from the recovery from Hurricanes Katrina and Rita, no measurable impacts on visibility have been monitored from this activity. We are proposing to find that Louisiana satisfies this component of LTS.

### **c. Emissions Limitations and Schedules of Compliance**

40 CFR 51.308(d)(3)(v)(C) requires that in developing its LTS, Louisiana consider emissions limitations and schedules of compliance to achieve the RPGs. As discussed in section IV.D.3 of this proposal, the SIP does not yet contain emission limits and schedules of compliance for those sources subject to BART. The BART emission limits established by the LDEQ are an element of the LTS, and because we are proposing to find that the relevant portion of the LDEQ's BART determinations are deficient, we propose to find that this element of the LTS does not satisfy the federal requirements.

### **d. Source Retirement and Replacement Schedules**

40 CFR 51.308(d)(3)(v)(D) requires that Louisiana consider source retirement and replacement schedules in developing its LTS. The LDEQ adequately addressed how it considered source retirement and replacement schedules in the development of its LTS. Louisiana's LTS includes the promulgation of new rules for retrofit technology for existing equipment to meet requirements for new NAAQS, which will also provide visibility benefits. We are proposing to find that the LDEQ properly addressed the requirements of 40 CFR 51.308(d)(3)(v)(D) in the development of its LTS.

### **e. Agricultural and Forestry Smoke Management Techniques**

40 CFR 51.308(d)(3)(v)(E) requires that Louisiana consider smoke management techniques for agricultural and forestry management purposes in developing its LTS. Where smoke impacts from fire are identified as an important contributor to regional haze, smoke

management programs should be a key component of regional and State regional haze planning efforts and long-term strategies (64 FR 35736).

The EPA encourages the development of smoke management programs between air regulators and land managers as a means to manage the impacts of wildland and prescribed burning. The sources of information described above, as well as other developmental efforts currently underway, provide effective, flexible approaches to smoke management. The LDEQ considered smoke management techniques for the purposes of agricultural and forestry management in its LTS. Chapter 13 of Title 33 of the LAC contains a general prohibition on “open burning of refuse, garbage, trade waste, or other waste material.” Although the LDEQ does not have the jurisdiction or authority to make any rule, regulation, recommendations, or determination with respect to agricultural burning or controlled burns of pastureland, marshland, or timberland, the Louisiana Department of Agriculture and Forestry (LDAF) does have the authority. The LDAF, in consultation with the LDEQ, is working to develop a SMP that includes measures that can be taken to reduce residual smoke from burning activities as well as a process to evaluate potential smoke impacts at sensitive receptors and guidelines for scheduling fires such that exposure of sensitive populations is minimized and visibility impacts in Class I areas are reduced. Because visibility impacts from smoke are significant in Louisiana, we propose to find that Louisiana should finalize its SMP.

#### **f. Enforceability of Emissions Limitations and Control Measures**

40 CFR 51.308(d)(3)(v)(F) requires that Louisiana ensure the enforceability of emission limitations and control measures used to meet reasonable progress goals. The SIP does not yet contain emission limits and schedules of compliance for those EGU sources, if any, subject to

SO<sub>2</sub> BART. Also, Louisiana's LTS is deficient because it relied on deficient non-EGU BART determinations as discussed in section IV.D of this action. The emissions limits for these subject-to-BART sources were not included in the LA RH SIP.<sup>35</sup> Therefore, we are proposing to find that the LDEQ has not fully satisfied the requirements of 40 CFR 51.308(d)(3)(v)(F) in the development of its LTS.

**g. Anticipated Net Effect on Visibility Due to Projected Changes**

40 CFR 51.308(d)(3)(v)(G) requires that in developing its LTS, Louisiana consider the anticipated net effect on visibility due to projected changes in point, area, and mobile source emissions over the period addressed by the long-term strategy. In developing its RH SIP, the LDEQ relied on the CENRAP's 2018 modeling projections, which show that net visibility is expected to improve by 3.22 dv at Breton NWA. The CENRAP's 2018 modeling projections account for changes in point, area, and on-road and non-road mobile emissions. The results of the CENRAP's 2018 modeling projections are discussed in sections IV.E.2 and IV.E.3 of this proposed rulemaking. We are proposing to find that Louisiana satisfies this component of LTS.

**F. Coordination of RAVI and Regional Haze Requirements**

Our visibility regulations direct states to coordinate their RAVI LTS and monitoring provisions with those for RH, as explained in section III of this action. Under our RAVI regulations, the RAVI portion of a state SIP must address any integral vistas identified by the FLMs pursuant to 40 CFR 51.304. *See*, 40 CFR 51.302. An *integral vista* is defined in 40 CFR 51.301 as a “view perceived from within the mandatory Class I Federal area of a specific landmark or panorama located outside the boundary of the mandatory Class I Federal area.”

---

<sup>35</sup> CAA 169A(b)(2); 40 CFR 51.308(e); and 64 FR 35714, at 35741.

Visibility in any mandatory Class I Federal area includes any integral vista associated with that area. The FLMs for Breton have not identified any reasonably attributable visibility impairment (i.e., RAVI) from Louisiana or other U.S. sources. The FLMs for the Class I areas that Louisiana's emissions impact in other states have not identified any reasonably attributable visibility impairment caused by Louisiana sources. For these reasons, the Louisiana RH SIP does not have any measures in place or a requirement to address RAVI. We propose to find that this requirement is not applicable to the LA RH SIP at this time. This provision may be re-considered upon receipt of submittals from the LDEQ for subsequent implementation periods.

#### **G. Monitoring Strategy and Other SIP Requirements**

40 CFR 51.308(d)(4) requires the SIP contain a monitoring strategy for measuring, characterizing, and reporting of RH visibility impairment that is representative of all mandatory Class I Federal areas within the state. This monitoring strategy must be coordinated with the monitoring strategy required in 40 CFR 51.305 for reasonably attributable visibility impairment. As 40 CFR 51.308(d)(4) notes, compliance with this requirement may be met through participation in the IMPROVE network. See the TSD for details concerning the IMPROVE network. We are proposing to find that the LDEQ has satisfied this requirement.

40 CFR 51.308(d)(4)(i) requires the establishment of any additional monitoring sites or equipment needed to assess whether reasonable progress goals to address RH for all mandatory Class I Federal areas within the state are being achieved. The CENRAP monitoring workgroup noted there was a visibility void in Southern Arkansas. An IMPROVE protocol monitor was located in north central Louisiana. PM<sub>2.5</sub> measurements from the Louisiana monitoring network help the LDEQ to characterize air pollution levels in areas across the state and therefore aid in

the analysis of visibility improvement in and near the Class I areas. The LDEQ also commits in the Louisiana RH SIP to consider alternative approaches to evaluating visibility monitoring obligations if that becomes necessary. We are proposing to find that the LDEQ has satisfied this requirement.

40 CFR 51.308(d)(4)(ii) requires that the LDEQ establish procedures by which monitoring data and other information are used in determining the contribution of emissions from within Louisiana to RH visibility impairment at mandatory Class I Federal areas both within and outside the state. The monitor at Breton was owned and operated by the USFWS. After this monitor was destroyed by Hurricane Katrina in 2005, the monitor was replaced and relocated nearby, by the USFWS, at Lake Catherine in St. Bernard Parish. The IMPROVE monitoring program is national in scope, and other states have similar monitoring and data reporting procedures, ensuring a consistent and robust monitoring data collection system. As 40 CFR 51.308(d)(4) indicates, participation in the IMPROVE program constitutes compliance with this requirement. We are therefore proposing that the LDEQ has satisfied this requirement.

40 CFR 51.308(d)(4)(iv) requires that the SIP must provide for the reporting of all visibility monitoring data to the Administrator at least annually for each mandatory Class I Federal area in the state. To the extent possible, Louisiana should report visibility monitoring data electronically. 40 CFR 51.308(d)(4)(vi) also requires that the LDEQ provide for other elements, including reporting, recordkeeping, and other measures, necessary to assess and report on visibility. We are proposing that Louisiana's participation in the IMPROVE network ensures the monitoring data is reported at least annually, is easily accessible, and therefore complies with this requirement.

40 CFR 51.308(d)(4)(v) requires that the LDEQ maintain a statewide inventory of

emissions of pollutants that are reasonably anticipated to cause or contribute to visibility impairment in any mandatory Class I Federal area. The inventory must include emissions for a baseline year, emissions for the most recent year for which data are available, and estimates of future projected emissions. The State must also include a commitment to update the inventory periodically. Please refer to section IV.E of this action, where we discuss the LDEQ's emission inventory. The LDEQ has stated that it intends to update the Louisiana statewide emissions inventories periodically. We are proposing to find that this satisfies the requirement in 40 CFR 51.308(d)(4)(v).

#### **H. Coordination with Federal Land Managers**

Breton NWA is a federally protected wilderness area for which the USFWS is the FLM. Although the FLMs are very active in participating in the RPOs, the RHR grants the FLMs a special role in the review of the RH SIPs, summarized in section III.H. of this action. We view both the FLMs and the state agencies as our partners in the RH process.

40 CFR 51.308(i)(1) requires that by November 29, 1999, Louisiana must have identified in writing to the FLMs the title of the official to which the FLM of Breton can submit any recommendations on the implementation of 40 CFR 51.308. We acknowledge this section has been satisfied by all states via communication prior to this SIP.

Under 40 CFR 51.308(i)(2), Louisiana was obligated to provide the USFWS with an opportunity for consultation, in person and at least 60 days prior to holding a public hearing on its RH SIP. In practice, state agencies have usually provided all FLMs – the Forest Service, the Park Service, and the USFWS, copies of their proposed RH SIP, as the FLMs collectively have reviewed these RH SIPs. The LDEQ followed this practice and proposed this implementation



plan revision for public comment on November 20, 2007 and notified the federal land manager staff of the public hearing held on January 24 2008.

40 CFR 51.308(i)(3) requires that the LDEQ provide in its RH SIP a description of how it addressed any comments provided by the FLMs. The LDEQ has provided that information in Appendix A of its RH SIP.

Lastly, 40 CFR 51.308(i)(4) specifies the RH SIP must provide procedures for continuing consultation between the state and FLM on the implementation of the visibility protection program required by 40 CFR 51.308, including development and review of implementation plan revisions and 5-year progress reports, and on the implementation of other programs having the potential to contribute to impairment of visibility in the mandatory Class I Federal areas. The LDEQ has stipulated in its RH SIP it will continue to coordinate and consult with the FLMs as required by 40 CFR 51.308(i)(4). The LDEQ states it intends to consult the FLMs in the development of future progress reports and plan revisions, as well as during the implementation of programs having the potential to contribute to visibility impairment at Breton NWA. We are proposing to find that the LDEQ has satisfied 40 CFR 51.308(i).

## **I. Periodic SIP Revisions and Five-year Progress Reports**

The LDEQ affirmed its commitment to complete items required in the future under our RHR. The LDEQ acknowledged its requirement under 40 CFR 51.308(f), to submit periodic progress reports and RH SIP revisions, with the first report due by July 31, 2018 and every ten years thereafter.

The LDEQ also acknowledged its requirement under 40 CFR 51.308(g), to submit a progress report in the form of a SIP revision to us every five years following this initial submittal

of the Louisiana RH SIP. The report will evaluate the progress made towards the RPGs for each mandatory Class I area located within Louisiana and in each mandatory Class I area located outside Louisiana which may be affected by emissions from within Louisiana. We are proposing to find that the LDEQ has satisfied 40 CFR 51.308(f) and (g).

#### **J. Determination of the Adequacy of Existing Implementation Plan**

40 CFR 51.308(h) requires that Louisiana take one of the listed actions, as appropriate, at the same time the State is required to submit any 5-year progress report to the EPA in accordance with 40 CFR 51.308(g). The LDEQ has committed in its SIP to take one of the actions listed under 40 CFR 51.308(h), depending on the findings of the five-year progress report. We are proposing to find that the LDEQ has satisfied 40 CFR 51.308(h).

#### **V. Proposed Action**

We are proposing a partial disapproval and a partial limited approval of Louisiana's RH SIP revision submitted on June 13, 2008.

Specifically, we are proposing to find that the following portions of the LA RH SIP have satisfied the federal requirement and are addressed in our proposed partial limited approval, insofar as the elements do not rely on the SO<sub>2</sub> reductions from the CAIR: the State's

- Identification of affected Class I areas;
- Establishment of baseline, natural, and current visibility conditions, including the URP;
- Coordination of RAVI and RH Requirements;
- RH monitoring strategy and other SIP requirements under 40 CFR 51.308(d)(4);

- Commitment to submit periodic RH SIP revisions and periodic progress reports describing progress towards the RPGs;
- Commitment to make a determination of the adequacy of the existing SIP at the time a progress report is submitted; and
- Coordination with Federal Land Managers.

We are proposing to find that Louisiana's RPGs meet some federal requirements, but also contain some deficiencies. We are proposing to find that the State's RPGs are deficient given our proposed finding that certain of Louisiana's BART determinations are not fully approvable. In general, the State followed the requirements of 40 CFR 51.308(d)(1), but these goals do not reflect appropriate emissions reductions from BART. For LTS, we are proposing to find that the State's LTS satisfies many of the requirements under 40 CFR 51.308(d)(3); however, we are proposing to find that the submitted LTS is deficient because a portion of it relies on BART determinations that we are proposing to disapprove (see section IV.E for detailed information regarding our proposed findings concerning LTS). Also, because visibility impacts from smoke are significant in Louisiana, we propose to find that that Louisiana should finalize its SMP. In addition, we are proposing to find that the following elements do not satisfy the federal requirements for the reasons discussed in section IV of this proposal: the State's

- Determination that the Mosaic Fertilizer Uncle Sam Plant is exempt from BART analysis; and
- BART analyses for ConocoPhillips, Rhodia, and Sid Richardson Carbon Black Plant.

As discussed in section I of this proposal, the State must address BART for SO<sub>2</sub> for EGUs and the related element of LTS because it can no longer rely on the CAIR to address these requirements. In a separate action, the EPA proposed a limited disapproval of the Louisiana RH

SIP because of deficiencies in the state's regional haze SIP submittal arising from the remand by the U.S. Court of Appeals for the District of Columbia (D.C. Circuit) to the EPA of the CAIR. 76 FR 82219. We are not taking action in this proposal to address the state's reliance on the CAIR to meet certain regional haze requirements related to NO<sub>x</sub> and SO<sub>2</sub> emissions from EGUs.

## **VI. Statutory and Executive Order Reviews**

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to act on state law as meeting Federal requirements and does not impose additional requirements beyond those imposed by state law.

### A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This proposed action is not a "significant regulatory action" under the terms of Executive Order 12866 (58 FR 51735, October 4, 1993) and is therefore not subject to review under Executive Orders 12866 and 13563 (76 FR 3821, January 21, 2011).

### B. Paperwork Reduction Act

This proposed action does not impose an information collection burden under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq*, because this proposed action under section 110 and subchapter I, part D of the CAA will not in-and-of itself create any new information collection burdens but simply approves or disapproves certain State requirements for inclusion into the SIP. Burden is defined at 5 CFR 1320.3(b).

### C. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) generally requires an agency to conduct a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small not-for-profit enterprises, and small governmental jurisdictions. For purposes of assessing the impacts of today's proposed rule on small entities, small entity is defined as: (1) a small business as defined by the Small Business Administration's (SBA) regulations at 13 CFR 121.201; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of today's proposed rule on small entities, I certify that this action will not have a significant impact on a substantial number of small entities. This proposed rule does not impose any requirements or create impacts on small entities. This proposed rule under section 110 and subchapter I, part D of the CAA will not in-and-of itself create any new requirements but simply approves or disapproves certain State requirements for inclusion into the SIP. Accordingly, it affords no opportunity for the EPA to fashion for small entities less burdensome compliance or reporting requirements or timetables or exemptions from all or part of the rule. The fact that the CAA prescribes that various consequences (e.g., higher offset requirements) may or will flow from this proposed rule does not mean that the EPA either can or must conduct a regulatory flexibility analysis for this action. Therefore, this action will not have a significant economic impact on a substantial number of small entities. We continue to be interested in the potential impacts of this proposed rule on small entities and welcome comments on issues related to such impacts.

#### D. Unfunded Mandates Reform Act

This action contains no Federal mandates under the provisions of Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), 2 U.S.C. 1531-1538, for State, local, or tribal governments or the private sector. The EPA has determined that the proposed action does not include a Federal mandate that may result in estimated costs of \$100 million or more to either State, local, or tribal governments in the aggregate, or to the private sector. This action proposes to approve or disapprove pre-existing requirements under State or local law, and imposes no new requirements. Accordingly, no additional costs to State, local, or tribal governments, or to the private sector, result from this action.

#### E. Executive Order 13132, Federalism

Executive Order 13132, entitled “Federalism” (64 FR 43255, August 10, 1999), requires the EPA to develop an accountable process to ensure “meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications.” “Policies that have federalism implications” is defined in the Executive Order to include regulations that have “substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.”

This proposed action does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132, because it merely approves or disapproves certain State requirements for inclusion into the SIP and does not alter the relationship or the distribution of

power and responsibilities established in the CAA. Thus, Executive Order 13132 does not apply to this action.

F. Executive Order 13175, Coordination with Indian Tribal Governments

This proposed action does not have tribal implications, as specified in Executive Order 13175 (65 FR 67249, November 9, 2000), because the action the EPA is proposing neither imposes substantial direct compliance costs on tribal governments, nor preempts tribal law. Therefore, the requirements of section 5(b) and 5(c) of the Executive Order do not apply to this rule. Consistent with the EPA policy, the EPA nonetheless is offering consultation to Tribes regarding this rulemaking action. The EPA will respond to relevant comments in the final rulemaking action.

G. Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks

The EPA interprets Executive Order 13045 (62 FR 19885, April 23, 1997) as applying only to those regulatory actions that concern health or safety risks, such that the analysis required under section 5-501 of the Executive Order has the potential to influence the regulation. This proposed action is not subject to Executive Order 13045 because it is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997). This proposed action under section 110 and subchapter I, part D of the CAA will not in-and-of itself create any new regulations but simply approves or disapproves certain State requirements for inclusion into the SIP.

H. Executive Order 13211, Actions that Significantly Affect Energy Supply, Distribution or Use

This proposed action is not subject to Executive Order 13211 (66 FR 28355, May 22, 2001) because it is not a significant regulatory action under Executive Order 12866.

I. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (“NTTAA”), Public Law 104-113, section 12(d) (15 U.S.C. 272 note) directs the EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs the EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

The EPA believes that this proposed action is not subject to requirements of Section 12(d) of the NTTAA because application of those requirements would be inconsistent with the CAA.

J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

Executive Order 12898 (59 FR 7629, February 16, 1994) establishes federal executive policy on environmental justice. Its main provision directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States.



The EPA lacks the discretionary authority to address environmental justice in this proposed action. In reviewing SIP submissions, the EPA's role is to approve or disapprove state choices, based on the criteria of the CAA. Accordingly, this action merely proposes to approve or disapprove certain State requirements for inclusion into the SIP under section 110 and subchapter I, part D of the CAA and will not in-and-of itself create any new requirements. Accordingly, it does not provide the EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898.

**List of Subjects in 40 CFR Part 52**

Environmental protection, Air pollution control, Intergovernmental relations, Nitrogen dioxide, Ozone, Particulate matter, Reporting and recordkeeping requirements, Sulfur dioxides, Visibility, Interstate transport of pollution, Regional haze, Best available control technology.

**AUTHORITY:** 42 U.S.C. 7401 *et seq.*

Dated: February 15, 2012.

Signed: Al Armendariz,

Regional Administrator, Region 6.

[FR Doc. 2012-4676 Filed 02/27/2012 at 8:45 am; Publication Date: 02/28/2012]